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MARCH, 1906

# THE AUTOMOBILE MAGAZINE

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## BLISS

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30 H. P. BLISS

**The Finest American Motor Car**

**DOUGLAS ANDREWS**

SELLING AGENT

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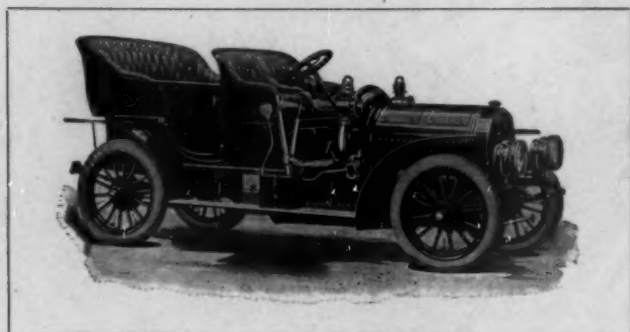
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Member A. L. A. A.

# The Automobile Magazine

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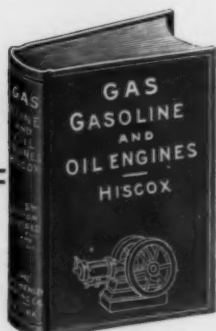
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# Gas, Gasoline AND Oil Engines

By GARDNER D. HISCOX, M.E.

This is the most complete book on gas engines; comprehensive and comprehensible.

Its contents should be familiar to every person connected with the handling of gas engines.

**Price, \$2.50**

**AUTOMOBILE  
MAGAZINE**

136 Liberty Street  
NEW YORK

## May Interest You

It is our purpose in future to devote considerable attention to garage news and interests. We wish to have a correspondent in every garage in the country and will pay liberally for contributions.

We advise people who admire beautiful specimens of the printers' art to send for White Bulletin No. 11, published by White Sewing Machine Company, Cleveland. It relates mostly to automobiles and the picturesque scenes where they have been photographed. Parties interested in automobiles have merely to ask for the Bulletin and they will receive it.

### Spoilt a Keen Hearing

Mr. Chamberlain, the noted British statesman, is not much of a sportsman but he likes to go shooting in the Highlands during the season that grouse are slaughtered according to law. He is withal a humane man and during a past season he noticed that his game keeper attendant suffered from cold ears. So Mr. Chamberlain at the first opportunity purchased a pair of ear muffs and gave them to the man.

Some months after they were out in the moors again together and Mr. Chamberlain noticed that the gillie did not wear the ear muffs.

"What's the matter, Archie," asked Mr. Chamberlain, "that you don't wear your ear muffs?"

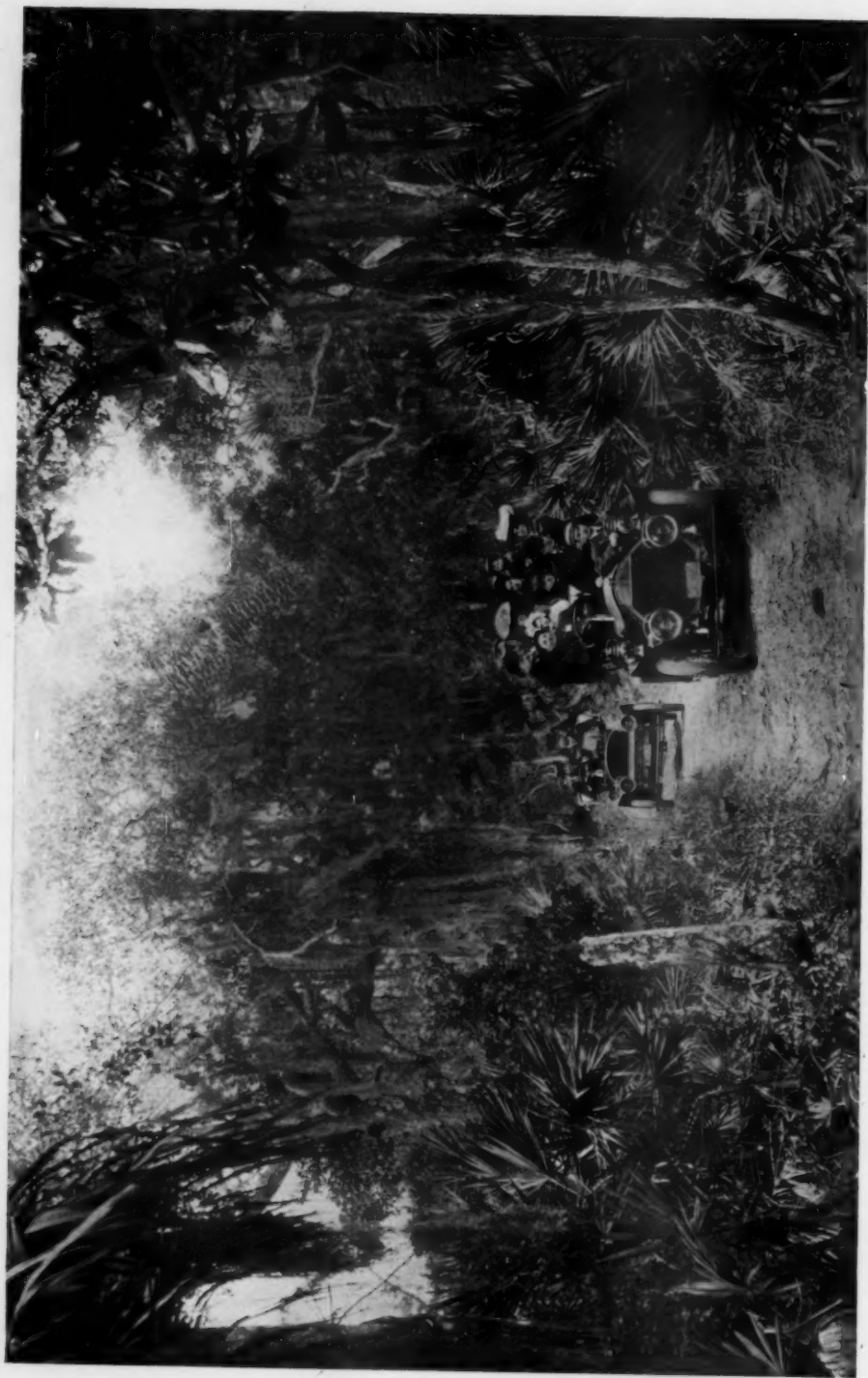
"Weel, sir," replied the gillie, "ae day a gentleman asked me to take a glass o' whisky an' I didna hear him, so I have never worn the muffs since then."

The Reo Automobile Company, Lansing, Mich., have commenced publishing Reo Echo, a literary magazine devoted to increasing the publicity of the Reo

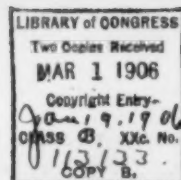


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TOURING IN FLORIDA'S FOREST PRIMEVAL. TREES FESTOONED WITH SPANISH MOSS. WAYNE TOURING CAR IN FRONT.  
SPOONER'S FRANKLIN IN REAR



# THE AUTOMOBILE MAGAZINE

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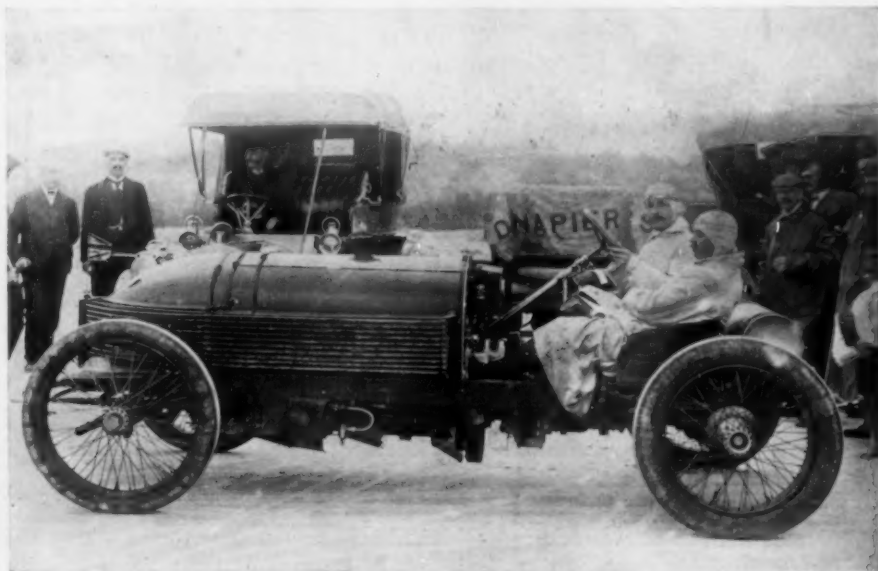
No. 3

## Florida Automobile Races

The fourth annual automobile tournament held on the Ormond Beach, Florida, was by no means a time of unmixed pleasure or even of excitement, but it ended on January 29 in a blaze of glory through the unparalleled speed of over

disagreeable; but there was a fine meet, and the crowds of people in attendance bore the climatic discomforts with admirable fortitude.

The races opened on Tuesday with One-Mile International for Sir Thomas



W. CLIFFORD-EARP IN HIS NAPIER RACING CAR

two miles a minute having been achieved by two automobiles, one a Stanley steamer, the other a Darracq gasolene machine.

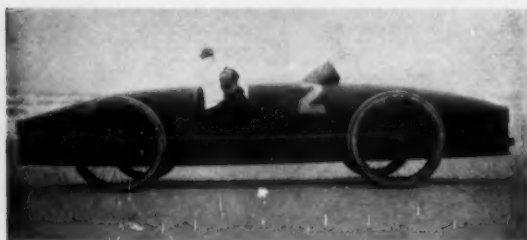
Florida as a sunny clime does not always hold its reputation in mid-winter, and this year the weather was intensely

R. Dewar's trophy. The first heat indicated the great speed capabilities of the 30 H. P. steam Stanley machine, for F. H. Marriott drove it over the course in 32½ seconds. W. Clifford Earp, with an 80 H. P. Napier, made second time in 40 seconds. Next came A. W. Fletcher,

driving G. W. Young's 110 H. P. Fiat, in 41 seconds. The second heat was won by V. Lancia, with 110 H. P. Fiat, in 37½ seconds. E. Adrino was second with 110 H. P. Fiat; time, 38½ seconds.

The final of this race was won by F. H. Marriott in the 30 H. P. Stanley; time, 33 seconds. E. Cedrino, 110 H. P. Fiat, second; time, 38 seconds.

Next event was One-Mile Heavyweight Gasolene Championship. First heat was won by E. Cedrino, 110 H. P. Fiat; time, 39½ seconds. Second time was made by H. W. Fletcher, driving G. W. Young's 110 H. P. Fiat, in 39½ seconds. The second heat of this event was won by V. Lancia, with 110 H. P. Fiat, in 42 seconds. Next was W. Clifford Earp, in 80 H. P. Napier; time, 43½ sec-



MARRIOTT IN STANLEY STEAMER

onds. The final was won by V. Lancia, 110 H. P. Fiat, in 37 seconds. W. H. Fletcher, in 110 H. P. Fiat, was second, in 37½ seconds.

One-Mile Steam Championship came next, and Marriott with the 30 H. P. Stanley covered the mile in 31½ seconds.

Wednesday was a nerve-racking day. Various disagreeable episodes disturbed the pleasure of the meet, the principal event being the Five-Mile Open Championship.

The first heat was won by V. Lancia, in 110 H. P. Fiat; time, 2:54½. Second heat was won by F. H. Marriott, in the 30 H. P. Stanley; time, 2:47½. H. W. Fletcher, driving 110 H. P. Fiat, was second; time, 3:02. The final heat was

won by V. Lancia, 110 H. P. Fiat; time, 3:01½. W. H. Fletcher, 110 H. P. Fiat, was second, and F. H. Marriott came in third with his Stanley steamer.

The Five-Mile Heavyweight Gasolene Championship came next and was won by W. Clifford Earp with the 80 H. P. Napier; time, 2:56. Next came Joseph Downey, driving 90 H. P. Mercedes; time, 3:29½.

Five-Mile Middleweight Gasolene Championship was next. Won by E. Cedrino's 30 H. P. Fiat Junior. Time, 3:53½. D. D. Holmes, with 50 H. P. Wayne, was second. Time, 5:46.

The first event of the third day was the Fifteen-Mile Price Handicap American Touring Cars Fully Equipped. Won by Frank Durbin, 20 H. P. Stanley, 25 seconds; time, 13:46½. D. B. Holmes, 50 H. P. Wayne, scratch, and J. E. Bristol, 30 H. P. Stoddard-Dayton, 5 seconds, also started. One second allowance was given for each \$100.

Ten-Mile Corinthian Championship, Amateur, for the George W. Young Trophy.—First heat won by S. B. Stevens, 80 H. P. Darracq; J. R. Harding, 90 H. P. Mercedes, second. Second heat won by J. L. Breese, 60 H. P. Mercedes; C. W. Barron, 90 H. P. Fiat, second.

Final won by S. B. Stevens, 80 H. P. Darracq; time, 9:28. J. L. Breese, 60 H. P. Mercedes, second; time, 9:47½.

After the Ten-Mile Middleweight title had been annexed by the new-bought 80 H. P. Darracq of S. B. Stevens, driven by Guy Vaughan, and H. N. Harding had scored in the Corinthian Handicap with E. W. Sutphen's Daimler, the course was made ready for the clamorous motor giants.

Marriott, whose ability was now recognized, fled down the boulevard of the turbulent Atlantic with the quivering "Teakettle," the McMurtry instrument glee-

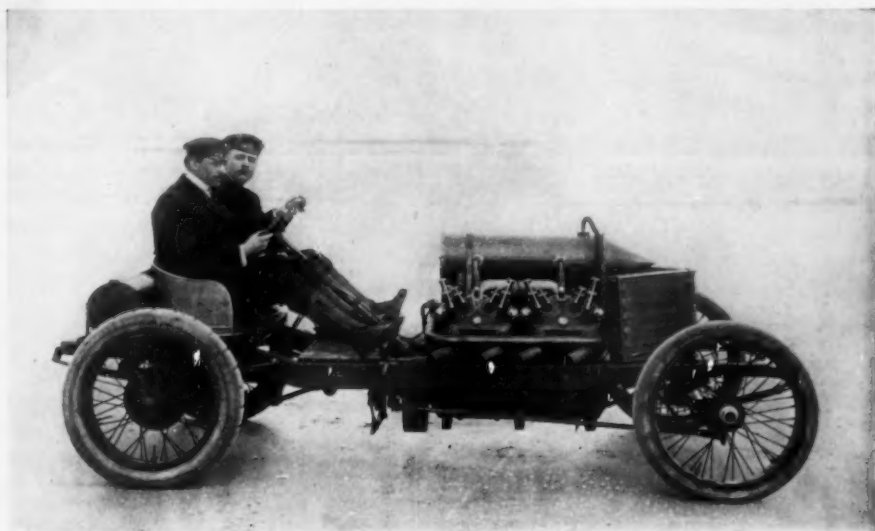
fully firing a shot when the three watches registered  $18\frac{3}{4}$ —121.57 miles an hour. This performance erased everything—official, unofficial, and alleged marks—from the time slate.

Chevrolet, a favorite who invariably preserves an unruffled exterior under the most trying circumstances, was entrusted with the 200 H. P. Darracq taken away from the choleric Hemery, and over the sands he went with a velocity that measured  $19\frac{3}{4}$  seconds in time—115.30 miles in sixty minutes. This now rates as the world's gasoline record.

Chevrolet again triumphed in the gasoline ranks, wherein the cars were such that they could be converted into touring form without much labor. The big Darracq swirled the mile in  $:30\frac{3}{4}$ , thus wiping out the accepted 1905 MacDonald (Napier)  $:34\frac{3}{4}$  and the unaccepted Bowden (Mercedes)  $:32\frac{3}{4}$  performance. Cedrino's Fiat did  $:36\frac{3}{4}$ , Earp's Napier  $:37\frac{3}{4}$ , and Kulick's Ford  $:40$ , with the lighter cars tapering off with new class marks.

#### Summary for Fourth Day

Ten-mile Middleweight Championship (all powers).—Won by Guy Vaughan,



DEMOGEOT IN HIS RACING DARRACQ WITH CANNON OF BLISS FACTORY

Earp and his Napier were clocked in  $:21\frac{3}{4}$ , Cedrino (Fiat) in  $:22\frac{3}{4}$ , and Kulick (Ford) in  $:24\frac{3}{4}$ . Then the smaller craft had an inning.

The mile marks were next disturbed. Marriott again excelled with his freak steamer, and when Announcer Earl megaphoned  $28\frac{1}{4}$  seconds—127.66 miles an hour, well under the two miles a minute—the shivering onlookers gave an ovation to Mr. Stanley, the proud constructor of the specially built space annihilator, for such it is and good for nothing else.

driving S. B. Stevens' 80 H. P. Darracq; time, 7:00; E. Cedrino, 30 H. P. Fiat, second; time, 7:50.

Ten-Mile Corinthian Handicap.—Won by H. U. Harding, driving E. W. Sutphen's 45 H. P. Daimler, 3 minutes 30 seconds allowance; time, 11:18 $\frac{1}{4}$ . S. B. Stevens, 80 H. P. Darracq, scratch, second. James L. Breese, 60 H. P. Mercedes, 3 minutes, third.

Kilometer Record Trials.—Steam (all weights).—Won by F. H. Marriott, 30 H. P. Stanley; time,  $:18\frac{3}{4}$ , world's record.



Gasolene (heavyweight).—Won by Louis Chevrolet, driving S. B. Stevens' 200 H. P. Darracq; time, :19 $\frac{3}{4}$ , world's gasolene record. W. Clifford Earp, 80 H. P. Napier, :21 $\frac{3}{4}$ ; E. Cedrino, 110 H. P. Fiat, :22 $\frac{3}{4}$ ; Frank Kulick, 105 H. P. Ford, :24 $\frac{3}{4}$ .

Gasolene (middleweight).—Won by S. B. Stevens, 80 H. P. Darracq; time, :25. Dan Wurgis, 32 H. P. Reo, :34 $\frac{3}{4}$ . D. D. Holmes, 50 H. P. Wayne, :41 $\frac{1}{4}$ .

Gasolene (lightweight).—Won by C. Fleming, 8 H. P. Maxwell; time, :59.

One-Mile Record Trials—Steam (all weights).—Won by F. H. Marriott, 30 H. P. Stanley; time, :28 $\frac{3}{4}$ , world's record.

Gasolene (heavyweight).—Won by Louis Chevrolet, driving S. B. Stevens'

6 minutes 18 $\frac{3}{4}$  seconds. Hilliard, 80 H. P. Napier, from 1 minute, second, in 8 minutes 3 $\frac{3}{4}$  seconds. Harding, 90 H. P. Mercedes, from 2 minutes 48 seconds start, third.

Thirty-Mile Championship for American-Built Cars.—Won by Marriott, Stanley, in 34 minutes 18 $\frac{3}{4}$  seconds. Walter Christie, 100 H. P. Christie, second, in 37 minutes 24 $\frac{3}{4}$  seconds. Kulick, 100 H. P. Ford, did not finish.

Fifteen-Mile Championship.—Won by Lancia, 110 H. P. Fiat, in 10 minutes, establishing a new record. Hilliard, 80 H. P. Napier, second, in 11 minutes 36 $\frac{3}{4}$  seconds; Cedrino, 110 H. P. Fiat, failed to finish.

Ten-Mile Open Championship, combined with Ten-Mile Heavyweight Championship.—Won by Lancia, 110 H. P. Fiat, in 6 minutes 19 $\frac{3}{4}$  seconds. Marriott, Stanley, second, in 7 minutes 35 $\frac{3}{4}$  seconds. Hilliard, 80 H. P. Napier, broke a spark plug.

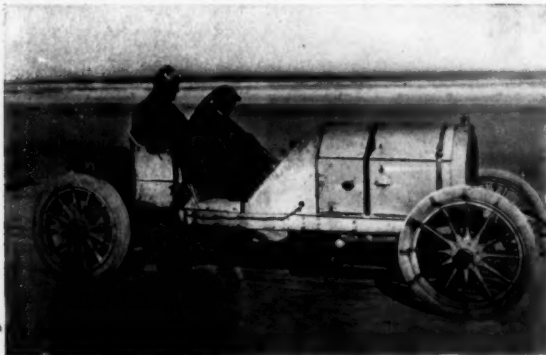
One-Mile Middleweight Championship.—Walkover for Vaughan, 50 H. P. Darracq; no time taken.

Two-Mile-a-Minute Record Trials.—Won by S. B. Stevens, 200 H. P. Darracq, driven by Demogeot, in 58 $\frac{3}{4}$  seconds; F. E. Stanley steamer, driven by Marriott, second, in 59 $\frac{3}{4}$  seconds. First trial—Stanley, 1 minute 3 seconds; Darracq, 1 minute 1 $\frac{3}{4}$  seconds.

Owing to stress of circumstances we have been compelled to draw upon The Automobile for most of the foregoing information.

#### Catching a Runaway

The poet Cowper tells us in his delightful way the story of John Gilpin's famous ride—how a runaway horse took him many miles further than he intended to go, and how his wife helplessly looked



LANCIA IN 110 HORSE POWER FIAT

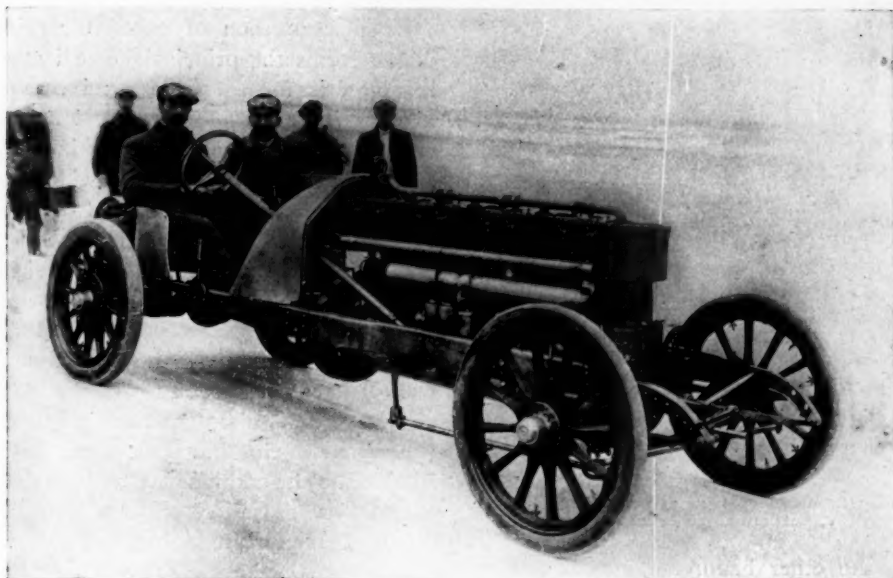
200 H. P. Darracq; time, :30 $\frac{3}{4}$ , new world's gasolene record. E. Cedrino, 110 H. P. Fiat, :36 $\frac{3}{4}$ . W. Clifford Earp, 80 H. P. Napier, :37 $\frac{3}{4}$ ; Frank Kulick, 105 H. P. Ford, :40.

Gasolene (middleweight).—Won by Guy Vaughan, driving S. B. Stevens' 80 H. P. Darracq; time, :40 $\frac{3}{4}$ . Dan Wurgis, 32 H. P. Reo, :52 $\frac{3}{4}$ . D. D. Holmes, 50 H. P. Wayne, 1:06.

Gasolene (lightweight).—Won by C. Fleming, 8 H. P. Maxwell-Briscoe; time, 1:29 $\frac{3}{4}$ .

#### Summary for Last Day

Ten-Mile Open Handicap.—Won by Lancia, 110 H. P. Fiat, from scratch, in



PAUL SARTORI IN VANDERBILT RACER THAT FAILED TO RUN AT EXPECTED SPEED

on as the fiery steed galloped away with her lord and master. Had the gentle lady been possessed of an automobile the story would have been shorter, and the horse would have been brought to terms at closer range.

One morning last month a steed harnessed to a light delivery wagon started at 114th street and Lexington avenue, New York, and, like Lord Tomnoddie's famous drive, carried ash barrels and apple stands and everything before him. Patrolman Clarke heroically seized the bridle and was dashed to the ground and severely bruised. Mrs. Callnare was in the path and received injuries. The incident was deepening into tragedy when Patrolman Long, who was gracefully swinging his club at the corner of 117th street, saw the fiery steed and attachments coming up the avenue. He also saw an auto occupied by a lonely chauffeur at hand. The policeman sprang to the rear seat. The alert chauffeur took in the situation at a glance. The horse had the start, but inch by inch the auto crept nearer and nearer, and the brawny

policeman reached out and caught the bridle and held on. The chauffeur changed his gearing and the subdued steed realized that he was up against superior forces. The policeman mounted the battered wagon and conducted the cowed colt back to where his race began. The chauffeur, without waiting for thanks, swiveled around and whisked away.

#### Governing Cooling Circulation

Taking everything into consideration, including changes in the weather and the extraordinary sensitiveness of the mixture to minute atmospheric changes and the consequent variation in the heat evolved by it, probably the only way to approximate a correct thermal regulation in cylinder cooling would be to by-pass a portion of the jacket water and to control the auxiliary flow by means of a thermostatic valve, either directly in contact with the walls or projecting into the combustion chamber. In some such way a nearly perfect regulation might be obtained. But,



Stanley in middle explains to W. Gould Brokaw and E. V. Hartford all about his fast steamer

on the other hand, the increased complication which such a device would entail, the difficulty in making it operative at all times, and the slight increase in efficiency which would probably result from its use would make its practical utility somewhat doubtful. In large motors of, say 100 H. P. and over, the saving might be sufficient to warrant the use of some such device; but for the more common sizes of lesser power it would seem that refinement and development would have to proceed along other lines, and that for some time to come the rough governing of the circulation in direct ratio to the speed of the motor would have to be "good enough."

#### Some Observations on Acetylene

Acetylene gas is generated by the chemical decomposition of water and calcium carbide. It is a permanent gas and of greater density than the ordinary coal gas, though less in volume per unit of weight. It will pass through a smaller aperture than ordinary coal gas. Notwithstanding the fact that this is a high power illuminant, no case of asphyxiation from it has so far been reported.

The composition of calcium carbide, which forms the principal ingredient of this gas, is formed from a mixture of about 60 per cent. of lime and 40 per cent. of powdered coke. This mixture is subjected to intense heat, by which the carbon of the coke is enabled to chemically unite with the lime. When the mass cools it is crushed to commercial sizes, and is carried in iron drums that are air and water tight. The calcium carbide has an intense affinity for water and must be kept from contact with even the moisture of ordinary air. The chemical transformation which takes place when water is added to the carbide may be represented as follows:  $\text{Ca C}_2 + \text{H}_2\text{O} = \text{C}_2\text{H}_2 + \text{Ca O}$ , when expressed in words the formula reads, Calcium carbide plus water gives acetylene gas and slaked lime. Any excess of water simply makes a solution of lime, which may be used for the making of mortar or the lime-washing of walls and buildings.

The problem of storage of this gas has been very successfully met by the Commercial Acetylene Company, of New York, in what they call their dissolved system. A storage cylinder made of the highest quality of sheet steel is used, which is guaranteed to stand a pressure of 1,200 pounds per square inch. This cylinder is fully filled with perfectly fitting disks of asbestos, which have a porosity of about 80 per cent. By means of suitable apparatus this cylinder is filled with acetone, equal to 43 per cent. of the volume of the storage tank.

Acetone is a liquid produced by the destructive distillation of woody fiber and is similar to wood alcohol. When in the storage cylinder it completely saturates the asbestos. One of the properties of this liquid is its ability to dissolve acetylene at ordinary temperatures. Acetone dissolves 23 volumes of acetylene at 62° F. The storage cylinder is charged with acetylene up to 150 pounds pressure.

Acetylene stored in a porous substance like asbestos and held in solution by acetone cannot explode while in the cylinder. Tests made with a cylinder so charged showed that when heated to a dull red the contents carbonized, but no explosion took place.

A railroad car equipped with this form of light and used in suburban service will last about three months without recharging. Gas from the tank can be drawn off as required, the amount varying slightly with the temperature of the surrounding

### Chrome Nickel Steel

In a recent address Col. Albert A. Pope said: "To-day there is nothing in automobile construction of more importance than the selection of materials. There are parts of a car where it is necessary to use a grade of metal that has great strength and is of such a composition as to resist heavy deflecting strains and yet be of so mild a character as to go through the shocks of daily use without crystallization and consequent breakage.

"The wonderful chrome nickel steel



R. E. OLDS AND PARTY IN REO JAUNTING CAR ATTACHED TO TOURING CAR

atmosphere. A regulating valve interposed between the storage tank and the car lamps feeds the illuminant constantly at low pressure to the burners. There is a safety relief device also provided so that if by any remote chance the pressure in the low pressure piping should rise as high as five pounds per square inch the relief apparatus would operate and vent the gas outside the car.

For automobiles, acetylene makes a perfect light.

used with a small percentage of carbon can stand 140,000 pounds of tensile strength to the square inch and yet possess a very high elastic limit. These qualities make it especially suitable for pivot axles, steering knuckles and similar parts.

"Other treatments of this same material produce in it just the right qualities for use where great deflection, torsion and tensile strains must be resisted. We are using large quantities of chrome



nickel steel in our 1906 product. The adaptation of chrome nickel steel to automobile construction is one of the marvelous modern advances in this direction. It is many times as expensive as the next best grade of steel and machining it is a difficult piece of work, but I told my business associates that we must use it despite its cost and the greater expense in handling. I believe it to be business economy to use the best that can be procured.

"This policy may not yield the greatest profit at once, but it will make business permanent and, therefore, be profitable in the long run."

#### **Scientists Despised the Gas Engine**

For a long time the engineering scientist kept aloof from gas engines of all kinds, regarding them contemptuously as expensive toys, with no prospect of future usefulness. It was the same kind of attitude that earlier scientists held toward the steam engine and toward nearly every other machine and apparatus that under the hands of practical inventors have become useful helps to mankind. We notice now that the scientists are beginning to pet and patronize the gas engine, particularly the kind used for automobiles. We are anxiously awaiting the appearance of the automobile whose engine is built according to the ideas of the pure scientist.

#### **A Punctual Quitter**

The ordinary office assistant of to-day is not noted for punctuality in getting to his desk unless there is a time clock that records his shortcomings, but the twentieth century young man is not much different from his predecessor in days gone by. Charles Lamb, the noted author, was a clerk in the British Admiralty office in London and was noted for arriving late in the morning. His chief remonstrated with him one morning, exclaiming: "Why, Mr. Lamb, you are a bad example

to every one in the office with your want of punctuality." "Well, Mr. Chief," replied the author, "I confess to being a little slack in the morning, but I am an example to the whole place at quitting time."

#### **Prose It**

The story is told that Crockett, the popular Scots novelist, produced a volume of poems and sent a copy to William Black for an opinion. Black's criticism was, "Prose it," and Crockett took the hint with much benefit. Thomas Hardy, the noted novelist, wants to reverse this process. After great success in prose writing he has now turned his attention to poetry, a branch of literature which has always interested him. It is interesting to remember in this connection that the great critic Coventry Patmore told the author that "A Pair of Blue Eyes" should have been written in verse.

#### **Burning Oil in Shops**

A report on the use of oil being burned in machine shops has just been made by a committee of the Southern Pacific Railway Company, showing that it costs 40 cents' worth of oil to heat one ton of wrought iron to a welding heat, as compared with 500 pounds of bituminous coal costing \$1.25. It costs \$12 a day for labor to carry the coal from the coal pits to the furnaces, while one man can supervise the distribution of oil all over the works. An important item is the excellent quality of the iron produced from the scrap metal when heated by fuel oil.

The Vanderbilt Cup Race will be held in this country, a very sensible decision made by the Automobile Club of France. Just where the contest will take place is not known. Boston to Worcester has been named, and so also has the new Pennington automobile speedway at Pennington, N. J.



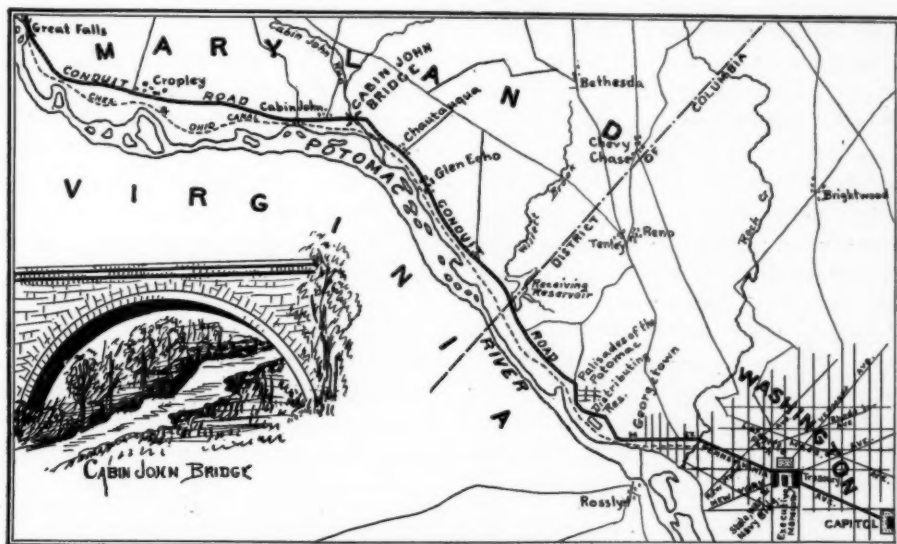
## Automobile Run from Washington, D. C., to Cabin John Bridge and Great Falls

By Robert Bruce

Of the many runs which extend in practically all directions from the national capital, this is the best and the one most frequently taken by strangers having a limited time to spend in and about Washington. To go over this course one needs scarcely more information than that conveyed at a glance at the accompanying map, which is drawn to the scale of

district line is passed in the course of this trip, as the map shows.

Over this same course, but through a huge conduit laid under the roadway—of which the name is the only suggestion—the city of Washington draws its water supply, a distance of fifteen miles. "Cabin" and "John," thus mysteriously coupled, are words whereby there hangs



the new District of Columbia map of the U. S. Geological Survey.

It will be seen how Pennsylvania avenue and Fifteenth street lead around the U. S. Treasury and the Executive Mansion into Pennsylvania avenue again, and finally into "M" street. The latter is followed absolutely direct—west—into the Conduit Road, which gives the route without the need of further attention all the way to Cabin John Bridge and the Great Falls of the Potomac. Not only is this the best, but it is also the most fashionable country automobile run into or out of the District of Columbia. The

a tale. They give the name to a babbling brook, a wonderful bridge and a hospitable hotel, which last should more properly be termed a wayside inn. To reach the inn one must travel the road, and the latter justly claims a word or two, beyond the outline running directions for which the map is sufficient.

A point to be emphasized is that no advertisements are allowed along this road. To add that it is as good as money and the science of Macadam can make it, that it is as smooth and level as a floor for nearly its entire length, and that it is shaded as the sun descends by tall and closely

growing trees, is all that is necessary to move the soul of a motorist. That the latter knows a good thing when he sees it is sufficiently attested by the number of motor cars to be seen on any pleasant afternoon that one chooses to make a pilgrimage to this enchanting spot.

But as to the tale. Cabin John Hotel is situated at one end of the bridge, spanning the chasm at the foot of which meanders Cabin John Creek, now almost at the end of its journey to the river. The structure, for all that it spans a humble creek, is a bridge of high degree, being formerly the longest single arch of masonry in the world, measuring 220 feet with a rise of  $57\frac{1}{2}$  feet. Its "length over all," so to speak, is 400 feet, and it cost Uncle Sam \$237,000. Nevertheless, some of its former greatness is shorn by the fact that now two structures in Germany exceed it. One, a masonry span across the Valley of Petruffe, Luxembourg, is 277 feet, with a rise of 102 feet, while the new stone viaduct at Plauen, Germany, has a single span of 295 feet 6 inches. Cabin John Bridge still remains unsurpassed in America.

The story of Cabin John is shrouded in mystery, upon which tradition throws only the faintest light. It tells us that once, many years ago, a veteran trapper came out of nowhere and built him a cabin on the banks of this quiet stream. Addressed by the few travelers who passed his way, the trapper answered to the name of "John." But inasmuch as even in those days there were many Johns, and as this particular John was not communicative as regarded his past, he came to be distinguished among others of that name as John of the Cabin. The imagination of his acquaintances seems to have failed them there, for when it became necessary to refer to John of the Cabin's humble abode they called it the Cabin of John.

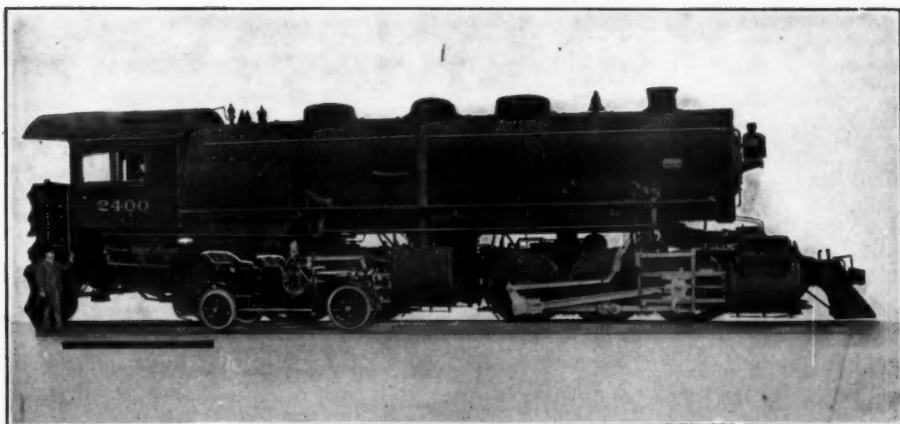
It was only in accordance with the ac-

cepted laws of philology that "the Cabin of John" should shrink into plain "Cabin John," which, moreover, had a mysterious charm all its own. This is undoubtedly the reason why it has clung to that locality ever since, long after simple John passed away to other scenes, leaving his cabin and his traps to moulder and decay.

John of the Cabin lived and prospered for many years in his lonely abode, visiting his cunningly constructed traps or hunting with his faithful dogs by day, whiling away the pleasant evening hours by the aid of a peculiar musical instrument, which some have claimed was the progenitor of the modern banjo. For somewhat of a musician, too, was John, as became one who communed so freely with nature. But he shunned the haunts of men, and were it not for the occasional traveler or huntsman who passed through these solitudes, John would never have won immortality. To these he always showed himself kind and hospitable, having few worldly possessions to fear for.

But one day John of the Cabin disappeared into the nowhere whence he had come, and left no trace behind him; here tradition leaves him. It is presumed that he died, where and when is not disclosed, except that it was after he went away, and consequently was not in the Cabin of John. Requiescat in pace. Romance and mystery still charm, as let us hope they ever will, despite some who would destroy the tradition of the place.

Many people came to view the site of Cabin John for years after the disappearance of that character, and hospitable John himself was in time succeeded by a modern hotel keeper who, however, endowed with a keener intelligence than his predecessor, put a fin-de-siecle price upon his hospitality. But it is worth it; a man at the end—or even in the middle—of an interesting ride doesn't worry over the



THE BERLIET AUTOMOBILE BESIDE THE LARGEST LOCOMOTIVE IN THE WORLD  
Automobile Weighs 2,500 pounds      Locomotive Weighs 477,500 pounds

price of a cooling drink or a square meal when he finds them at Cabin John, with the fresh smell of the woods in his nostrils, and at his feet as beautiful a valley as there is anywhere.

The bridge bears the following tablet:

#### WASHINGTON AQUEDUCT

**Begun A. D. 1853**

President of the U. S., Franklin Pierce  
Secretary of War,

**Building A. D. 1861**

President of the U. S., Abraham Lincoln  
Secretary of War,      Simon Cameron

The blank space originally contained the name of Jefferson Davis, and much has been written as to how his name was erased. A gentleman formerly connected with the aqueduct commission has made the following statement in regard to the matter:

"The removal of Jefferson Davis' name from Cabin John Bridge has been attributed to General Meigs, wholly without reason, he being at the time Quartermaster General. In June, 1862, at the request of the Secretary of the Interior, the Hon. Caleb B. Smith, to whose department the aqueduct had just been trans-

ferred, I accompanied the Secretary and a number of members of Congress on a tour of inspection of the aqueduct, by way of the canal. Opposite Cabin John Bridge several of the party disembarked and walked to the bridge for a nearer view. Returning in hot haste, 'Do you know,' said the Hon. Galusha Grow to the Secretary, 'that d—d rebel Meigs has put Jeff. Davis' name on the bridge?'

"Turning to me, the Secretary said: 'The first order I give you is to cut Jeff. Davis' name off the bridge.' Not taking seriously the Secretary's remark, I did nothing in the matter. A week later the contractor arrived to resume his work upon the bridge, and called to pay his respects to the Secretary. The contractor's first work was to remove Mr. Davis' name." The incident attracted great attention at the time.

The round trip to Cabin John Bridge and Great Falls, the latter simply a few miles farther out the same road, can be made in considerably less than half a day; and no more beautiful scenery than that along the Potomac river in the District of Columbia and in nearby Maryland is to be seen anywhere. A variation, and a good one at that, to the much-traveled route, is by way of Thirty-second

ond street and the Loughborough road; however, this increases the straight-and-home distance by several miles.

Another possible variation is to enter the River Road at Tenleytown and ride to the first crossroads and turn south on the Seven Locks or Persimmon Tree road, which enters the Conduit Road about a mile and a quarter above Cabin John Bridge. This trip is close on to twenty miles and is rather tough, because of the River road, the surface of which in places is in very bad shape. For a short distance after leaving Tenleytown the going is excellent, and then the change gradually appears. There are streams to ride through, marshy places, hills to climb, and last, but the worst of all, no good road when any level stretch is reached.

Still another way is a sort of variation of the last-given route, slightly better. This route is via Bethesda, turning off from the main road just at the southern extremity of the park and riding out the narrow dirt road until the River Road is reached. This will give only a few miles' riding over the River Road, though the distance is increased considerably by the change. Strangers, especially, should keep to the Conduit Road all the way out and back. Either of the others will take time which can better be given to some other excursion within a few miles of the National Capital.

#### **Watching the Oil Passages**

In the process of overhauling a car, it is most important that very careful attention be given to all ducts and passages through which oil and grease are supposed to flow, and especially so in the case of the grease ways. For it must be remembered that any impurities which may find their way into a pail of grease will not settle or float out as is often the

case with oil, but will remain buried in it.

Usually in assembling a machine, the wiring and oil piping go in among the finishing touches. They are laid as unobtrusively as possible, and hence are most unhandy to get at unless the machine be pretty thoroughly dissembled. To take them down is a tedious task, and hardly worth the while simply for the purpose of cleaning them, so that it is better to do the work without removing them when possible.

There are several ways in which this can be done without going to much trouble in the process, the most natural of which is, of course, to blow them out with a steam jet. The tubes are first uncoupled at both ends, and a rubber hose fitted with a coupling of the same sort as is used in the lubricator attached to a steam pipe or the air valve of a radiator, and "hooked on" to the different pipes in succession. In every case the flow of steam should be kept up until the melted grease and oil ceases to drip from the lower end of the pipe and the steam flows through freely.

When steam is not available, a slower, though not necessarily less efficient, method is to connect with a hot water radiator, or even with the hot water faucet to be found on the wash stand in any garage; but in this event it is well to flush the pipes out with gasoline afterward, to clear all water from the system.

An expedient not infrequently useful on the road is to first run a flexible wire through the passages, and then having filled them with gasoline (the lower end being plugged up temporarily), to allow them to stand for half an hour or so until the contents are somewhat thinned down, and then to simply blow them out with a tire pump. This process



may be repeated until everything is perfectly sweet.

It is not at all a bad plan to occasionally flush out a force feed oiler with kerosene and to allow it to feed through to the bearings, as it tends to clear any incipient accumulations, and can do no harm, even if a small amount of it drains through to crank pit or gear case; while in the case of grease feeds, a close watch should be kept on all pipe joints and on the ends of greased bearings where accessible, and any excessive leakage taken to denote either excessive feeding or a clogged bore in some part of the way. It is very essential to feed a machine plenty of lubricant, but it is most essential to see that the stuff reaches its intended destination.

#### Armored Auto

The Austrian military authorities are experimenting with an automobile of a unique character. It may be said to be the first of its kind, and is built somewhat after the design of the "Monitor," the first turreted battleship that made its appearance during the American Civil War. The whole of the machine is enclosed in armor, the only openings being where the driver looks out and another opening in the turret through which appears the muzzle of a machine gun. The auto is of 40 H. P. and is constructed similar to the ordinary Mercedes touring car. All four wheels are direct driven, there being two differentials and two transverse springs. The machine

can be run over any kind of road, and it is said that the experiment has shown that it can cross rough fields without any difficulty. Steel-sheathed Arbell wheels are used, similar to those made at Nice by Serpollet. There is accommodation



President Pratt of the Associated Automobile Club of New Jersey with Wife and Friends Touring in Florida

for two men only, the driver and the gunner. The machine was constructed at the Damlier factory in Austria, and a large number of automobiles are already in use by the European armies in conveying provisions, ammunition, and also



for reconnoitring purposes. Under certain conditions it would be a formidable machine against exposed infantry, but if it should come within the range of field artillery, to say the least, the position of either gunner or driver would not be a desirable one.

### **The Nation's Roads**

The wagon roads of the country belong to the nation—not to the States, counties or townships. Every highway in the land is pre-empted by the general government for the carrying on of an essential part of its business, any interference with which, even though it be by a highway commissioner or road overseer, is immediately resisted with the force of the government, and the offender sent to prison. The general government holds fast to the highways of the land for the transmission of mails, and no authority, State or county, may intervene. The government does not pay one farthing as a privilege in doing this. The government does not pay one penny of the expense of improving or constructing a single foot of road in the land, except in its reservations, parks and cemeteries. The government has the roads for its own use, and under federal statutes, if necessary to the continuance of the mails, all other business could be stopped thereon without further ado about it.

And yet, we have people who think the government ought not to participate in the expense of road building in the States. It is a fair and honest proposition to say that the government ought either to extend its aid to the States in highway construction or it ought to construct a system of roads at its own expense wherever its business, of whatever character, extends. Road building in the United States is a national obligation. The obligation will never be discharged until the country has a uniform system of highways.

### **Changing Rules of Sport**

In sport, pastimes and business the average American is always wanting to make new rules and change away from established practices. Football and golf rules are constantly under pressure to make changes. Golf has been a royal game for over 500 years, and the rules based on good practice ought to be accepted even by the most ardent progressionists, but they are constantly setting up their puny experience against the practice of centuries.

Said one golfer reported by Pulver in the New York Mail: "What is wanted is a return to the broad and simple rules of the game and the abandonment, once and for all, of the hopeless and endless attempt to legislate for particular cases or the principles of equity.

"Let us revive the spirit and letter of the rule which says that a ball must be played wherever it lies, or the hole be given up. If we do that we shall not hear golfers asking the ridiculous question, 'What do I do here?' It seems to have been forgotten that the game of golf is to play the ball with a club, no matter where it gets to, and not to invent and invoke rules to enable us to evade our golfing difficulties."

### **Dustless Cars**

The elements that distinguish the Spyker dustless car are rapidly coming into notice. They embrace the inclosing of the whole of the under side of the car to the end of the frame, which finishes in a point, the casing and frame thus forming a shape similar to the bow of a boat. The British Automobile Commercial Syndicate are giving special encouragement to dust-covering devices, and in the feature of covering the chain-driven car it has been found to be a great saving to have the chain entirely covered. The experience with bicycles proved the advantage of covering of all working parts.

## General Correspondence

This department has been established to enable our readers to express their views on automobile matters. We require the real name and address of each writer as evidence of good faith. We hold ourselves responsible for everything published in the Magazine, but we do not always endorse the views of correspondents.

Editor AUTOMOBILE MAGAZINE:

I happen to be too busy to respond to your invitation to contribute something to your correspondence department, but I consider its introduction a good idea. If you will accept a word of advice, leave out some of the rot, such as the new two-cylinder gas engine which is going to do duty at half cost by having the pistons in one cylinder, with the explosion between the pistons. The advantage that would come from that arrangement would be equal to the relief given to one's toes by pulling up on the boot straps. There are other fallacies that have found voice in THE AUTOMOBILE MAGAZINE that I may find time to puncture. HARRIS.

### Coroner's Quest Law

Editor AUTOMOBILE MAGAZINE:

It is a singular circumstance that accidents involving vehicle drivers invariably bring, as the first step toward inquiry, the arrest of some innocent person. In any other case, strong suspicion, or a complaint made by some reputable person, and a warrant signed by a magistrate is essential to place even a suspected person under arrest. In this regard locomotive engineers have long been the subjects of what to most of them appears to be a lasting disgrace. Few of them who have been many years on the road have had the good fortune to miss suicides or trespassers guilty of contribu-

tory negligence. In many instances the hapless victims were never seen by the engineer at all, or if seen at a few feet distant, it was impossible to avoid disaster.

Automobilists are now having a similar experience. Last week in New York a coroner's jury unanimously exonerated a chauffeur who was unfortunate enough to have a man run in front of him while he was running his automobile at a slow speed along Fifth avenue. The chauffeur was several days in prison. This week Mr. David Ryan, of Hudson, N. Y., was run down by an electric automobile owned by the New York Transportation Company in front of the Hotel Cadillac, at Forty-third street and Broadway. According to the police, who were eye-witnesses, Mr. Ryan attempted to cross the street, but became confused, and before he could make up his mind what to do he was knocked down. Mr. Henry Siegel, the chauffeur, shut off the power and reversed the machine when he saw Mr. Ryan's danger, but was unable to bring the machine to a stop, and at this writing is being held a prisoner to await the leisurely action of the coroner. Human life should by all reasonable means be safeguarded, but innocent people should not be degraded, and an arrest is always a degradation. The utmost that common sense would suggest in the matter would be that drivers unfortunate enough to have their machines collide with individuals who thereby receive injuries should be classed as any other witness, and, if necessary, detained as a witness with others equally innocent. C. E. LEWIS.

New York, Feb. 10, 1906.

**Starting from the Seat**

Editor AUTOMOBILE MAGAZINE:

I was greatly struck with the similarity of the automobiles on view at the exhibitions in New York, and I suppose it is owing to the fact that the machine is getting nearly down to a perfect working basis now. It is well that the good points can be all utilized in one machine, so that it does not matter a great deal what machine one buys. This is as it should be, but I am sure that you will allow me to

but in avoiding the awkward appearance of a man trying to set a big machine going. I have no objection to winding up a clock, but when it comes to winding up a 40 H. P. automobile, count me out.

ALEX. MUNRO.

Wilkesbarre, Pa., Feb. 15, 1906.

**Depends Upon One's Point of View**

Editor AUTOMOBILE MAGAZINE:

All signs point to the fact that 1906 will be a banner automobile touring year.

Not only will there be many thousands more cars in use during the coming season than ever before, but reliable information has been rapidly accumulating and the instinct to "get out on the road" cultivated in numerous ways. The real pioneering is in a sense over, and with the increased reliability and mileage capacity of American automobiles it would be strange indeed if the result already foreshadowed should not be fully realized.

Nevertheless, American automobilists as yet know very few districts well, in the sense that their European



Mrs. F. Ed Spooner Teaches the Young Idea How to Shoot in the Florida Greenwoods

say that the Matheson car, built in Wilkesbarre, Pa., has one point about it that it would be well if the other builders would copy—that is, if they can do so without infringing on some patented right. The Matheson car can be started from the seat, the same as a steam engine, and does not require any cranking or winding, which seems to me to be a great advantage, not only in the fine machinery,

cousins know Great Britain and the Continent. The principal reason for this, of course, is the great number of poor country roads which surround even our largest and most progressive cities. In England and on the Continent, however, one is safe in starting out for almost any desired point, whether he has ever been over the identical road or not; but we

are at least a generation from that in the United States. Our bad roads as yet outnumber the good ones by so large a majority that in the past, at least, the tourist has only been safe in starting out in a new direction after he had been counseled by some one else who has made the identical trip.

The East Hudson district, the Berkshire Hills, the Jersey coast and a few other sections have been exceptions to this rule, but on the whole the situation has been as stated. While this condition remains (as to some extent it does) the reports and recommendations of returning travelers, whether favorable or other-

fortnight's recreation should think of bringing a motor vehicle along (a second time, anyhow) was more than he could comprehend. This was not because there were no good roads "way down East," but because this gentleman had unwittingly blundered upon a route which took him over a very rough and sandy section of country, so that when he returned to Portland all the courage had literally "gone out of him."

With a better knowledge of the best routes in the State of Maine, however, a tourist may start out on a week's or a month's rambling tour and be reasonably sure of covering the entire route without



NEW YORK PEOPLE AT CUBAN RACES

wise, must have a great deal to do with fixing the sentiment, so to speak, of the touring fraternity, as regards the different sections. Guide books and other means of information are all right so far as they go, but they are conclusive only when such trips as they outline fit the identical plans of the tourist; and this, naturally, is not always the case.

The writer met a motorist in Portland, Me., one day last summer, who was thoroughly disgusted with the roads of the Pine Tree State. In his deliberate opinion, no more wretched highways could exist in the civilized world, and how any one coming into Maine for a

serious difficulty. Nor would he return home, as often the case now, disappointed and worn out from making his way over rocks and pulling through sand. Every automobilist who makes a trip into an unfamiliar territory has this responsibility to those who have never been over the ground, and to the sport generally; that he take reasonable care to find out its best, rather than its worst, in respect to condition of roads and facilities in general.

In the summer of 1904 James B. Dill, the well-known New York lawyer, found the trip from Quebec, Canada, to Portland, Me., via the Rangeley Lakes, one



of the best and most enjoyable of the many he has so far taken; and others have come back to give generous praise to the Pine Tree State, its people and many of its roads. Such experiences as these are a discovery as well as an interpretation of a section which the motorist already referred to called "the worst ever." An adverse report given wide publicity will frequently put a ban upon a district which is difficult or impossible to overcome. So it is better to avoid "snap judgment," and to be sure that one is right before giving advice to others.

ROBERT BRUCE.

### Fallacies About Compression

Editor AUTOMOBILE MAGAZINE:

When I was a youngster in the Civil War days I went with an elder brother, who wished to make a purchase, into a store on Pennsylvania avenue, Washington. The prices quoted were so villainously exorbitant that my brother said to the salesman: "There seems to be something in the atmosphere of Washington that makes a man an infernal scoundrel as soon as he engages in business." This statement may be paraphrased as follows: Something in the automobile business seems to transform a man into a liar as soon as he engages in it.

To illustrate the above we need only take the case of compression in the automobile engine. If a truthful statement has ever been made regarding this by the manufacturer or dealer it has escaped the notice of the buyers.

One day last summer while loafing in a garage an automobilist came in with a car he had recently purchased. The manager of the garage, who was also proprietor and dealer, said to him that: "If the engine did not stop promptly when the current was turned off you must not get uneasy, as the compression in the cylinders is very high, viz., 851 pounds." After the owner of the car had

left the garage I said to the manager: "You should not make such statements, as you cannot verify them." He at once replied: "I said nothing but the truth and can prove it by the statements made by manufacturers." In this case the cylinders (double opposed) were  $4\frac{1}{2}$ " fore  $\times$  5" stroke. The cranking lever was  $7\frac{1}{2}$ " long. I asked if the cylinders had compression relief for cranking, and he said: "No. I can crank all right without." I liked the chap and felt like convincing him that he and his manufacturer were making untruthful statements in the matter of compression, and with that in view I told him to take pencil and paper and multiply the area of the piston— $20$ "  $\times$  the compression 85, and divide the product by the true ratio of the cranking handle to the engine crank. The result was 566 pounds. He said: "Do you mean to tell me I must pull 566 pounds every time I crank that engine?" I replied: "Yes, if it compresses to 85 pounds." And he still talks 85 pounds compression and rates a pair of  $4\frac{1}{2}$ "  $\times$  5" cylinders at 22 H. P. with a maximum of 29.

If you will take the trouble to write to a dozen dealers in automobiles asking the amount of compression in their cylinders the chances are ten to one that not one of them will confess to less than 75 pounds. This is especially true of the cheaper cars.

The stationary gas engine practice, where the problem of cranking does not exist and where the water supply for cooling is unlimited, compression runs much higher—even to 175 pounds, when natural gas is used for combustion. With the present difficulty in carrying away the heat generated by explosions in the automobile engine it is doubtful if compression could be carried to anything like the pressure claimed by the makers without great danger to overheating.

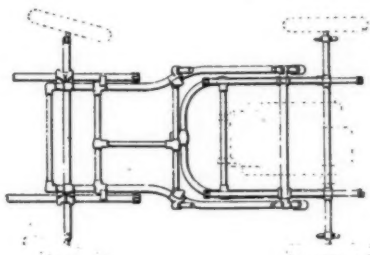
J. H.



## What Inventors Are Doing

### Patent Office Department

The degree of perfection which has been attained in the construction of the automobile in a few years is undoubtedly owing to the encouragement given to that spirit of ingenuity in mechanical devices which is peculiarly an American characteristic, and while much work passes muster in the U. S. Patent Office as being patentable, it does not follow that much of it is indispensable. The Patent Office brings it within the horizon of consideration, and out of this perennial foun-



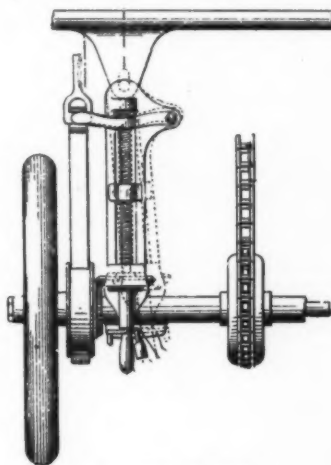
MOTOR VEHICLE

tain of contrivances is filtered the mechanical molecules that, drop by drop, fill up the measure of perfection to which the construction of the automobile has already attained.

In beginning this new department in the *AUTOMOBILE MAGAZINE* our aim is to present in as brief and intelligible a manner as possible the construction and purpose of such new devices as may seem to us to be worthy of serious attention. We have some familiarity with technical terms, but we shall endeavor to stand between our readers and the cloud of learned dust that generally surrounds the official description of mechanical devices. In brief, our aim shall be to come to the point at once.

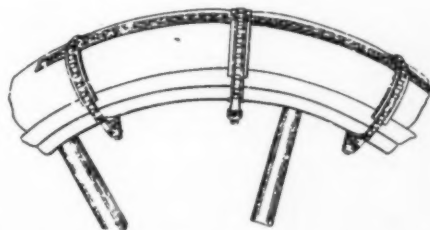
### Motor Vehicle

A patent has been granted to Mr. Harry M. Pope, Chicopee Falls, Mass., for an improved motor vehicle, the chief



LOCKING DEVICE

new features of which are running-gear frames divided into two members, one carrying the motor and pivotally connected at its front end to the other member by a cross bar, the front part of the frames being held at right angles to the

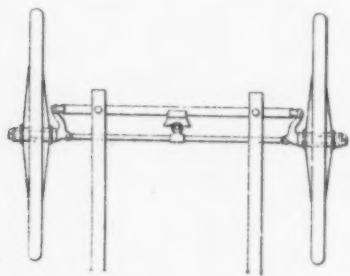


ATTACHMENT FOR VEHICLE WHEELS

rear part, the result being that the wheels may accommodate themselves to uneven surfaces without distortion of the motor and driving connections.

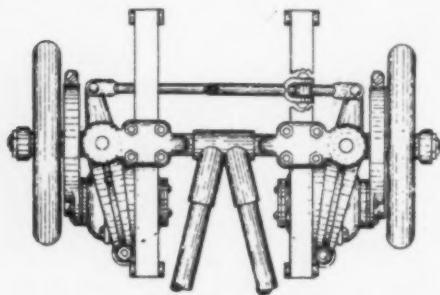
### Locking Device

Mr. Isaac W. Heysinger, Philadelphia, Pa., has patented a contrivance for stopping motor cars. The mechanism consists of a beveled toothed wheel attached to the driving axle which, when in gear, actuates a spiral screw on which a nut



STEERING GEAR

is adjusted, which after a number of rotations of the driving axles, carries the nut to the end of the screw, and arrests the movement of the wheels. The spiral screw and attachments are slidably con-



MOTOR VEHICLE

nected at the axle so that they can be readily put in motion when necessary to stop the car.

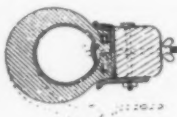
### Attachment for Vehicle Wheels

Mr. George W. Kirkpatrick, Rochester, N. Y., has secured a patent for an attachment for vehicle wheels consisting of a number of chain bands extending over the tire, and chains extending between the bands and arranged over the

tread portion of the tire. A series of bolts pass through and engage the rim and tighten the band.

### Steering Device

A steering device consisting of a pair of oppositely disposed spindles pivotally

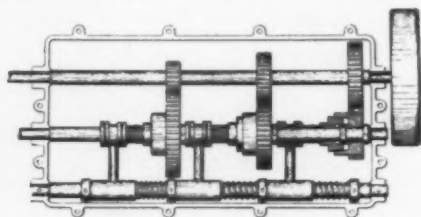


VEHICLE TIRE

connected to the body portion of the vehicle, and a rod connected at its ends to the spindles which is moved by a pair of oppositely disposed cams controlled by the steering wheel, has been patented by Mr. G. K. Rudert, Wilmington, Del. The device has the elements of strength and simplicity.

### Motor Vehicle

Mr. Leroy S. Pfouts, Canton, Ohio, has secured a patent for a motor vehicle furnished with an axle provided with hollow bearing-shanks, with sleeves loosely mounted upon them, and provided with motor-supporting stubs and stub axles and gear casings, and means for



MOTOR GEARING

communicating rotary motion from the motors to the traveling wheels.

### Vehicle Tire

A patent has been granted to Mr. Charles Stein, Akron, Ohio, for a vehicle tire combining a shoe and rim for

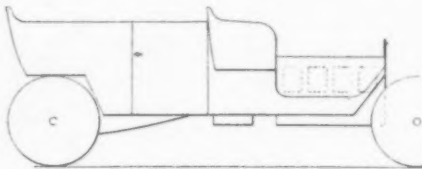
a wheel-felly embodying a shoe formed with meeting margins, forming a seat or support for the inner periphery of the pneumatic tube, and bolts passing through the shoe and the felly of the wheel.

#### Variable Speed Gear

Mr. M. C. Talcott, Hartford, Conn., has patented a variable speed gear with gears of different diameters on the motor shaft, a transmission shaft furnished with gears meshing with the gears on the motor shaft, the gears on the one shaft being keyed, and the gears on the other being loose, with clutches to connect the loose gears with their shaft, with means to move the gears into position as desired.

#### Motor-Car

A patent has been granted to Mr. F. W. Lanchester, Birmingham, England,



MOTOR CAR

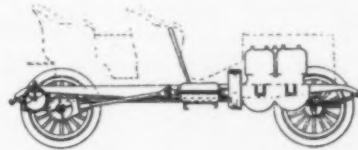
for a motor car in which the motor is situated in the leg space of the front seat, the motor dividing the front leg space longitudinally.

#### Dust-Allayer for Automobiles

Mr. W. H. Parker, Royaloak, Mich., has invented and patented a dust-allaying device for automobiles, consisting of a fan and fan casing disposed in the rear of the vehicle having a longitudinal opening transverse to the line of travel and adapted to deliver a blast of air through the opening and means for varying the opening, the fan being driven by the propelling mechanism of the carriage.

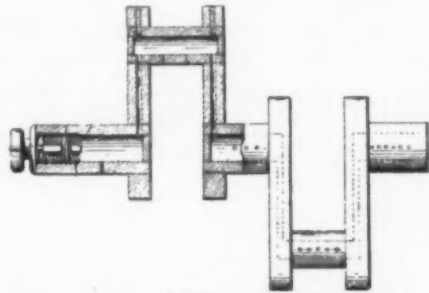
#### Lubricator

A patent has been granted to Mr. T. S. Patterson, New York, N. Y., for a lubricator for crank and similar shafts. The contrivance consists of the shaft having a bore extending from end to end,



DUST ALLAYER

the bore being reduced in the crank arms and enlarged in the crank pins and shaft bearings, the shaft being provided with



LUBRICATING DEVICE

outlet-ports at the bearing points, the number of holes increasing in number as the distance from the filling end increases.

#### The Automobile Reaching Outside Civilization

Searching for the North Pole and traversing polar regions are not likely routes of travel for automobiles, yet places formerly cut off from the civilized world are finding the automobile the greatly needed connecting link with the realms hitherto considered beyond the pale of reach.

"With the extension of the railroad, Goldfield has taken a new lease of life," said Richard Coe, a Spokane mining op-

erator, who has just returned from Nevada. "Goldfield is the outfitting point for all that surrounding country.

"They sell water in Goldfield the same as the Standard Oil Company peddles its oil. The water is taken about town in wagons and is sold at about \$1.50 a barrel, or twenty-five cents a bucket.

"Because of the scarcity of water and hay it is extremely expensive to keep horses and mules in that part of the country. Every time a horse is watered it costs twenty-five cents; that is the regulation price, and the hay has to be shipped in. As a result automobiles are becoming quite popular and are taking the place of the horses and mules to a certain extent.

"Persons going from Goldfield to outlying points nearly all go in automobiles which make regular trips. There are some enormous machines there that carry a dozen or more passengers. At times I have seen as many as fifteen or twenty automobiles standing in the streets of Goldfield."

#### **An Unexpected Compliment**

The London Academy is a highfalutin publication that rarely has anything pleasant to say about common Americans. Reviewing "Outdoor Pastimes of an American Hunter," however, it departs for a moment from its accustomed severity and says: "From a British point of view this work is enhanced by being written in good, readable English, such as any educated gentleman would wish to express himself in were he to set down his experiences in whatever form of sport he followed, though but few authors possess so direct and explanatory a style of writing as does Mr. Roosevelt, and one, too, that entirely dispenses with the slangy and highfalutin words and sentences so common in American journalism."

#### **Carbon a Life Creator**

Most of our readers are familiar with the manifestations of carbon that produce heat and combustion. Some of the scientists who are investigating the origin of life now attribute a new power to the element carbon. They insist that it possesses the power of linking its atoms together in very large and complex groups, and that these groups are able to assimilate the molecules of certain other atoms. The larger these loose, mobile groups grow, the more power they acquire. So long as their structure is not dissolved by too great a heat or solidified by intense cold, they become the vehicle for influencing minute cells, which acquire a power wholly novel and unexpected.

The complexes group themselves into minute cells, which acquire the power of uniting with other cells. They absorb into their own substance such portions as may be suitable, and exclude the less organic portions. Thus, then, begins the act of "feeding." A cell which grows by assimilation need not remain entire, but may split up into two or more new cells. Thus begins the act of "reproduction."

What success in competition means is illustrated by the fact that more than sixty persons have tried to buy the Pierce-Arrow car which won the Glidden tour last year. They all said they would prefer the car that ran a thousand miles without adjustment to a new machine.

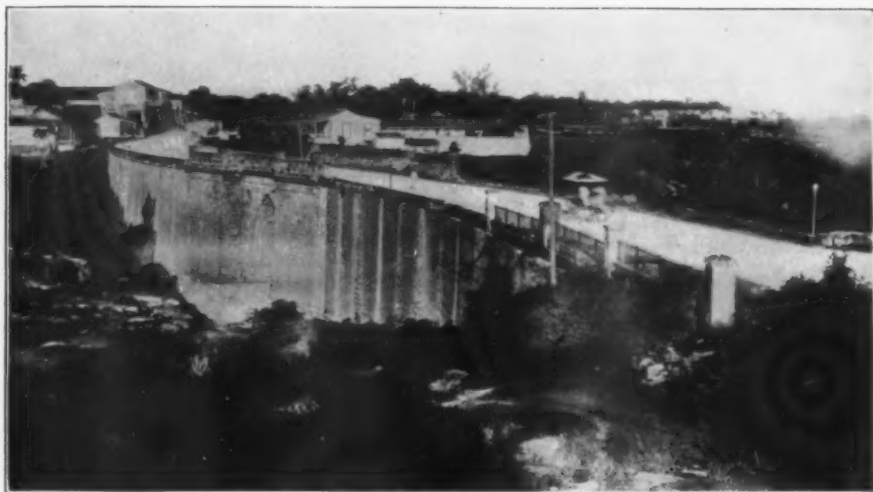
#### **We've Been There**

"Gracious, John!" exclaimed Mrs. Slangey, "you surely haven't brought any one home to dinner!"

"Sure!" replied Slangey. "Haven't you got any grub for them?"

"Why, no. You told me this morning you'd bring home a couple of lobsters for dinner and——"

"Well, that's them in the parlor."—Philadelphia Press.



OLD SPANISH BRIDGE NEAR HAVANA

## International Automobile Race for the Cuba Cup

Under skies of opal, on a track glistening like spangled porphyry, amid scenery clothed in the glow and glory of an eternal spring, the international automobile race for the Cuba Cup was run at Havana on February 11. It seemed as if the youth and beauty and age and honor of Cuba were assembled, filling the colossal grand stands to overflowing. Tens of thousands thronged the shining highway and clustered beneath the towering palms and foliage-embowered plantain and mahogany trees that skirted the high road from Havana to Artemisa and on to San Cristobal, a distance of fifty-four miles. There were four very sharp turns on the road, besides sudden and tortuous curves, and, while the condition of the surface of the road was all that could be desired, the disturbing angles and curves were of the most harassing kind and not in any sense suited to high speed motoring. As a result, of the four splendid cars that started in the hands of the most accomplished drivers in the world, only one finished. The others met with disaster, and the general

effect was of a dispiriting kind, so much so that the races intended for next day were postponed by the committee till next year.

The complete race embraced four laps of the tortuous road, making 217.79 miles in all, and the arrangements were of the most complete kind. Five hundred men had been working on the road for more than a month, at a cost to the government of \$30,000. Havana had appropriated \$7,000 and the Automobile Association of America had subscribed over \$14,000 to the expenses of the tournament and the entertainment of the guests.

There were four competitors started for the Cuba Cup. Bernin, in a 90 H. P. Renault, owned by W. Gould Brokaw, was the first to get away, starting at exactly 10 o'clock. He was followed by Lancia in a 110 H. P. Fiat, entered by Enrique Conill, who won the cup last year. Cedrino, driving Gustav Roek's 110 H. P. Fiat, was the third to start, and Demogeot, driving an 80 H. P. Darracq, came



last. There were intervals of three minutes between the starting of each machine, and Demogeot lost five minutes at the start, having trouble with his clutches.

The start was made at about a mile from the grand stands at Camp Columbia, and as each car passed the stands the cheering was deafening, President Palma and a great gathering of State officials cheering with the rest. Cedrino came to grief at the double curve near Artemisa, about forty miles from the starting point. He struck a tree and the

first lap was concluded. On the second lap of the course Demogeot was the only contestant remaining. He continued at a high speed and finished in 3 hours 38 minutes 18 seconds. Everybody was of opinion that Lancia would win. He was going about seventy-five miles an hour when he lost control at a curve. Demogeot's time averages within a fraction of a mile a minute. The winning machine is owned by Luis Marx, a Cuban, and is the same which was driven by Hemery, winning the great road races last year, the Ardennes Circuit in France and the



CUBAN VILLAGE WITH BAD TURN ON ROAD

car turned turtle. The machinist, Capra, and Cedrino were both seriously injured and taken to the Guanajay Hospital. Lancia, the Italian chauffeur, was going at a terrific speed beyond Artemisa, and when crossing the railroad track the machinist was thrown out of the car, which put Lancia and his car out of the race. Bernin was the first to reach San Cristobal, in 51½ minutes, Demogeot taking 54 minutes and 26 seconds. On the return run Bernin had the misfortune to lose time through the puncture of a tire and was practically out of the race before the

Vanderbilt Cup race in Long Island. In addition to the tortuous curves there was a constant surging of the excited crowds that made the driving of a car exceedingly hazardous, and Demogeot has at once stamped himself as a careful and masterly chauffeur.

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Attempts are making to have Senator W. J. Morgan superintend a series of races in April under the control of the Jacksonville Automobile and Motor Boat Club. Florida weather will be about right then.

## "The British Point of View"

By *A. F. Sinclair*

### **Driving Certificates**

In a quiet and unostentatious fashion there has been inaugurated in the United Kingdom a system of examinations and the appointment of a body to grant certificates which is bound to have beneficial effects on the movement in this country. The Automobile Club of Great Britain and Ireland have made a number of grave mistakes in their general

and shall pass an examination on the construction, working, management and care of cars. The holder of a first-class certificate may have had a less thorough mechanical education, a second-class ticket holder less than a first, and a third-class less than a second. Not, however, in the extent of knowledge or the capacity of the drivers will the most value be in connection with these certificates, but



CURVE WHERE ACCIDENT HAPPENED NEAR CANDELARIA

policy regarding automobilism, but their enemies accuse them of nothing more serious than occasional errors of judgment. On the other hand, they have done a vast amount of really useful work, and in instituting a register of professional drivers they are only adding one more to the many services rendered to the motoring public.

### **Graded Certificates**

There will be four grades of these certificates in accordance with the qualifications of the holders. The special certificate will be granted to drivers who shall pass a satisfactory examination in mechanical proficiency, shall have served an apprenticeship in an engineering work,

in the control over the conduct of the paid driver which will be exercised.

### **Professional Black Sheep**

The paid driver is in this country one of the gravest problems in connection with motoring. With cars increasing in number with the most remarkable rapidity it is becoming more and more difficult to secure reliable men who have not been corrupted by Continental practices. Backsheesh—which might perhaps more properly be described as blackmail—levied on supply men is such a common practice as to have become a burden on people of not affluent means, and it is in the protection of such people that the certificates will be of value. The docu-

ments have to be sent in annually to the register office for renewal, and if anything should have been proved against the holders during the interval the certificates are to be indorsed accordingly. There can be no doubt that as the value of these tickets becomes generally known every owner will insist on his driver being the possessor of one.

#### Method of Examination

At the present time the Board of Examiners appointed by the A. C. G. B. and I. are moving from one city to another examining men as rapidly as they can overtake the duty. They are thoroughly competent men, one of them, Mr.

test of a more technical character, which is very thorough.

#### The Tourists Trophy Race

While races are common enough nowadays in many countries and trials of cars to test their reliability as touring vehicles are not uncommon, only in this country is there a race for cars in which the regulations are so strict as to secure beyond doubt that the vehicles are real touring machines. The race was held in the Isle of Man last year, the laws of Great Britain being inoperative in that happy island, and again the event has just been announced to be run there on the 27th of September next. The dis-



SAN MARTEN, PASSED IN THE CUBAN RACE

Worby Beaumont, being author of one of the most exhaustive works published on the internal combustion engine. The amount of honorary work undertaken by many of the more active spirits in connection with automobilism in this country is really surprising. The examiners visit any populous center by arrangement, with the local club usually, and examine the candidates by means of written and oral questions and driving. The written examination has reference to the law regulating the running of cars on the roads and to the management of the car, besides which there is a viva voce

tance is somewhat under 300 miles and the race is surrounded by quite a number of interesting conditions, the best known being the limitation of fuel. The gasoline is supplied by the club, and cars are required to cover a minimum of 25 miles for each gallon. As the total weight, two passengers included, must be not less than 2,400 pounds, it is evident that there will require to be considerable economy exercised. The fuel limit is not to demonstrate the most economical machine, but to prevent excessive speeds, which the law in Great Britain does not permit. There were fifty-

four entries for this race last year, and that number is expected to be considerably exceeded on the next occasion.

#### The Renault Patent

A good deal of consternation was created among the manufacturers in this country when it was announced some time ago that a French court had held as valid a patent taken out in 1899 by Messrs. Renault Freres, the well-known French makers, for a live-axle drive with direct action from the clutch to the axle on the top speed. The live-axle drive has been gaining in favor gradually, but surely, and in the London Olympia show in November last about 50 per cent. of the cars were fitted with this method of conveying the power to the road wheels. If, then, the patent were equally valid in Britain as in France, there was a sorry prospect before makers in this country, because the great majority using the live axle also fit a direct drive on the top speed. Inquiry brought consolation, however, as it is fairly certain that at least two patents, one by Lamplough (copied from an American lathe) in 1896, and another by Whitney, applied to a steam automobile in 1898, both anticipate the Renault design. But patent law is not a fixed quantity by any means, and the Society of Motor Manufacturers and Traders, Ltd., a powerful combination including most of the makers and dealers in the United Kingdom, have decided to take up the question should the Renaults attempt to assert their claim in Britain. This is tantamount to a challenge to the French firm, and if they do not take up the glove it will be equivalent to an admission that they consider their claim in this country too feeble to fight.

#### Four Versus Six Cylinders

A wordy warfare on the relative mer-

its of four and six cylinder gasoline motors has been in progress in the technical papers, and even the motoring columns of the public press, for about a month, and it appears to be as near an end as when it began. Meanwhile good advertising is being obtained by the verbal contestants, and they are receiving a latitude for the display of their prowess in that direction which suggests the absence of more interesting topics. The question is one which can only be decided by demonstration, and there are not wanting signs that a competition may be got up between a 40 H. P. six cylinder Napier



ON SAN CRISTOBAL ROAD

and a 40 H. P. four cylinder Martini for the purpose.

#### Automobile Shows

We are in the middle of the provincial motor car shows, and those at the Crystal Palace, London, and Waverley Market, Edinburgh, closed their doors only a few days ago. Liverpool, Newcastle, Manchester and Glasgow form something of a procession, to be whipped in by the more pretentious display at the Agricultural Hall, London, toward the end of March. But truth to tell, most of the provincial shows are of very little im-



Spooner and Lazanick Resting, Aided Secretary Butler, Wife and Party

portance, and were it not for the missionary work of propaganda would be ignored by the makers entirely. The big show of the Society of Motor Manufacturers and Traders at Olympia, London, will before long so blanket all English provincial and other London shows that they will not be able to exist. At Olympia all the new models are exhibited for the first time, and a man able to afford an automobile can afford to go to London to buy it.

#### Daytona Speeds

The marvelous speeds attained on Florida Beach have attracted wide attention in this country, all the daily papers commenting on them, and it is agreeable to observe that neither in the public nor in the technical press is there that tendency to skepticism which at one time characterized comment on American feats. Still, the wonderful going of the Stanley steamer notwithstanding, there is no inclination to overestimate the value of the performance. The gasoline machine presents too many advantages, it is believed, to be seriously challenged by the steam engine.

#### Elections and Automobiles

It may not be unknown to the intellectual readers of this high-class publication that during January the inhabitants of these islands enjoyed a general Parliamentary election. In that election, for the first time in Britain, the automobile came into general use for the purpose of conveying voters to the polls, and it is probable that in every constituency

in Great Britain where electors had to attend for the purpose of recording their votes the automobile was less or more in use. In university constituencies voting is done by letter, hence the proviso. But it cannot be said that the use of the automobile was accountable for any measure of success. On the contrary, from

the fact that in the majority of cases the poorer man was elected, it is probable that the candidates having most motor cars were defeated. In the Glasgow district, where the writer resides, there were twenty-three men put up for ten seats, and six of the candidates had more motor cars than the whole of the others, but all six were defeated. Ergo, eschew automobiles!

#### Motor Stages

Motor stage lines are becoming a feature of locomotion in the smaller towns adjoining New York. In view of the success they are meeting with it would not be surprising to learn that the trolley lines have seen their best day. The popularity of the motor stages, especially with the rising generation, is very great. Old people, naturally enough, stick to old ways. Young people turn their faces toward the rising sun.

#### Never Keep the Engine Going Inside

An automobile in operation gives off so much monoxide, a poisonous gas, that people ought to be careful about operating a motor where there is restricted circulation of air. A gentleman of our acquaintance had a trying experience by neglecting this precaution. He returned the vehicle to the garage and neglected to stop the engine. Presently he began to feel dizzy and would have fallen over in a faint had not one of his employees come and opened the door. He recovered after he had a breath of fresh air.



He then began an investigation and found the danger. During the past summer two men were found dead in a closed cabin of a naphtha launch near Atlantic City, and an investigation revealed the fact that their death resulted

in a similar manner. They had closed themselves up in the little cabin with the engine running. The two men fell over unconscious and died, while the engine itself finally stopped after it had consumed all of the oxygen in the room.

### **Spoiling Automobiling Privileges in New Jersey**

The State of New Jersey has the most equitable automobile speed laws of any State in the Union, but they have been miserably abused. As a resident of New Jersey, operating an automobile, we thoroughly indorse the following views on the abuse of speeding privileges in the State, as expressed by a well-known lawyer:

"The law as proposed by Mr. Frelinghuysen would be unfair and pernicious. I am frank to say that the privilege now afforded to owners of automobiles is very much abused by the owners of large cars. It is the large car that comes thundering down the road at a fifty-mile clip, just clearing a carriage or a pedestrian at this tremendous speed, sometimes driven by a careless, or perhaps drunken, chauffeur, that brings out the universal criticism that seems to be moving our Legislature to action. This should be prohibited. The limit through country roads is now too low and in cities too high. Forty to fifty miles an hour is none too high on a clear road and fifteen is none too high in a city.

"This is the principle that should govern: All persons should have the privilege of our roads without unnecessary

danger in the enjoyment thereof. It is an unnecessary danger forced upon the user of a road to compel him to meet a heavy motor car at a fifty-mile clip. The



PEERLESS SHOWING A PEERLESS RECORD AND STILL GOING

most experienced runner may go wrong in some way about the passing point, and then the catastrophe.

#### **As to Speed Limitations**

"It is unnecessary to keep up this speed to make an enjoyable or useful trip in an auto. The driver should be compelled to come down to a certain speed when passing another vehicle. A man should be allowed to take all the chances he pleases at high speed, but he should be compelled to avoid this danger to others. My recommendation would be

that the limit be fixed about as I have stated, with the further restriction that the speed be cut down whenever approaching another vehicle to a limit of, say, ten miles an hour.

"We need no high-priced overseer. The violation of a reasonable law, such as I have suggested, should be a crime punishable with imprisonment, touching alike the rich and the moderate, and the law could be enforced upon the complaint of any one. We have no supervising officer over offenders under our criminal statutes. Public prosecutors throughout the State attend to this business. Any one violating a criminal law may be prosecuted and punished by the courts upon the complaint of any citizen. The automobile law mentioned by me could be enforced in a similar manner."

We earnestly indorse every word of this grave arraignment of reckless racing practices. We have had many narrow escapes while out in a modest automobile conforming to the law from reckless brutes, whose only idea seemed to be "Rush along, no matter who is hurt." A month's reflection in jail would not be extreme punishment for such people.

#### The Wrong Respectability

The rupture of negotiations with the South African shipping ring recalls a story which is to be found by the student of Hansard. It was told by Lord James of Hereford during the discussion on Lord Russell's Prevention of Corruption bill. Some years ago a suit was brought before the late Master of the Rolls by a large firm of merchants at Bombay, who complained that their shipping agent in Lancashire had systematically charged them with a very large amount of commission over and above his legitimate dues. Investigations showed that two invoices were used, and that the transactions were so conducted as to make a difference of 70 per cent. in favor of the

commission agent. In the course of the hearing Sir George Jessel inquired of the eminent counsel for the defendant what was the answer to the complaint, and the reply was that the practice was common in the particular trade. Counsel said he had a large number of respectable people in court to give evidence in proof that the practice was universal. The Master of the Rolls said: "You can send those respectable people home; the sooner they leave the court the better!"

#### Dangerous Imitations

One of the most serious phases of the "yellow peril" is the perfect way that Oriental mechanics imitate the work done in the Western world. For years the Chinese and Japanese were too stupid in their imitation of Western practices, as the sailor found who carried a coat to a Chinese tailor to be duplicated, and found that the new coat had patches on the old one imitated.

The story is told of a Chinaman who had resided some years in New York and on returning to his native heath carried with him a working model of a locomotive. He was an influential man and had resolved to have a large locomotive made from the model. Every rod, bolt, nut, rivet and casting was enlarged in proportion to ten times that of the model and fine mechanical work was done throughout. Then they proceeded to raise steam, when "puff" went the boiler in pieces. They had not thought to increase the thickness of the boiler sheets.

#### Her Point of View

Him—I wouldn't marry the best woman on earth.

Her—That's a sensible declaration.

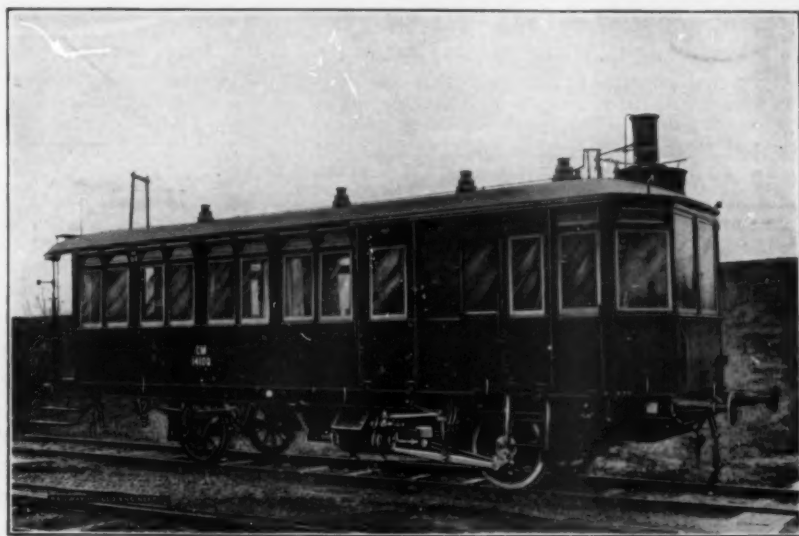
Him—I'm surprised to hear you say so.

Her—But it would be such an ill-assorted match, you know.—Chicago News.

**Steam Railway Motor Cars for Austria**

The Imperial Austrian Railway administration have recently introduced a number of motor cars of the type known as the Komarck system. The boiler is of the water tube pattern. There are two cylinders working compound with diameters of  $9\frac{3}{4}$  inches and  $15\frac{1}{4}$  inches, with a stroke of  $15\frac{3}{4}$  inches. The driving wheels have a diameter of  $39\frac{1}{2}$  inches. The engine is about 150 H. P., with a speed of 20 miles per hour. The weight of the car, empty, is about 20 tons. It is divided into a luggage compartment, a section to

more says that Great Britain was the land of the original "blackmail," the "mail," rent, or tribute paid on the Anglo-Scottish and Highland borders by farmers to freebooters in return for immunity from their visitations. In Ireland a similar institution was known as "black rent." The old word "mail," meaning rent, and coming either from the Anglo-Saxon "mael," a portion, or the old French "maille," a halfpenny, is quite a different word from the postal "mail," which is simply "male," a bag. To Coke and Blackstone "blackmail" had



AUSTRIAN STEAM RAILWAY MOTOR CAR

seat eight non-smokers and a larger section to seat thirty smokers. Herr Golsdorf, an eminent Austrian engineer, has fitted the engines with a new type of valve gear, consisting of a combination of simple levers without the usual radial link.

**Origin of Blackmail**

The people of the world first became familiar with the term "blackmail" through descriptions of its operation in Scott's "Waverley." But Justice Philli-

an innocent significance, meaning rent paid in labor or produce, as opposed to "white rent" paid in "white money," silver.

**Starting Heavy Loads**

The power employed in operating railroad trains must be applicable in large units at low speed. The locomotive, with its enormous cylinders, always has sufficient power to slip the driving wheels in starting. The electric motor can, of course, do the same thing. There

is trouble with the gas engine, however, when attempts are made to use it for starting a heavy load. The same with the idea of using steam turbines to turn the driving wheels of locomotives or railroad motor cars. It may be that methods of transmission will be invented whereby a motor highly speeded may be geared down to start a maximum load without shock, but until that comes there is no use talking of turbines for starting heavy loads.

#### **Motor-Car Industry in Scotland**

The French cars, which enjoyed for a few years a monopoly of the trade in Scotland, are being rapidly supplanted by the home made article. The success of the Argyll, Albion and Arrol-Johnston cars are rapidly bearing fruit. Extensive new works are being erected, chiefly in Glasgow. Over 3,000 men are employed in the various works in the vicinity of Glasgow alone, and other works of lesser dimensions are starting up in other parts of the country. The output of the Alexandria Works is now between 3,000 and 4,000 vehicles per annum. A feature of the Glasgow made machines is the introduction of heavy motors taking the place of the lorries, formerly drawn by the large Clydesdale horses, who are fast disappearing from the commercial capital of Scotland.

#### **British Misery**

England has been contending against the curse of pauperism for more than half a century. She has had recourse to all the means that common sense could suggest, and common sense has been compelled to acknowledge itself conquered before the rising tide of misery and of the army of the unemployed. The sensible practice of protecting the interests of the industrial masses that has banished pauperism from America will in the long run be resorted to in Great

Britain, but it will take years of penury to convince politicians that such practical means is better for home interests than theories about the glories of free trade.

#### **A Moving Electric Plant**

A miniature electric central station on wheels has been patented by Mr. Hugh Reid, of the North British Locomotive Company, Glasgow. It is something like the Hansmann electric locomotive that was tried in France several years ago, and proved a failure. The leading difficulty with inventions designed to generate power on a movable vehicle is that the weight to be carried is too great for economical development of tractive power. The trolley arrangement vanquishes such appliances when the question of economy arises.

#### **Vigilance the Price of Safety**

In great cities public safety demands that certain rules concerning the storage of combustibles should be imposed even upon such law unto themselves as garage owners. There are certain rules of this kind in existence in New York and other great cities that are not noted for their observance. There has been a revival of zeal for duty well done among public officials of various large cities lately, and the revoking of sundry garage licenses has been one of the painful results.

#### **When Tyrants Will Cease Troubling**

The compensations to be seen in the day when the iron ore will be exhausted, the coal mines worked out of their last ton and no tailings to speak of for labor to make out a subject of dispute are that Mitchell and the coal barons will not be able to put screws upon people who are freezing for want of fuel and starving for want of work on steel structural operations.

# THE AUTOMOBILE MAGAZINE

A MONTHLY JOURNAL DEVOTED  
TO THE INTERESTS OF  
AUTOMOBILISTS

ANGUS SINCLAIR, President and Editor

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## Marvelous Speed

The extraordinary velocity attained by the racing automobile not only establishes new records of speed for any kind of power-driven vessel but sets the racing men and engineering world conjecturing on the limit of speed possibilities. Until the automobile appeared the steam locomotive was easily the fastest motor in the world; yet after ninety years of developing the limit of locomotive speed was little over one mile per minute or 60 miles an hour. Under extraordinary circumstances a train speed of about 90 miles an hour has been maintained for a short time, but records of speed above that have generally been the loose time taken by newspaper reporters' watches.

It is possible to concentrate immense power in an electrically-driven motor, and we have no doubt that the leading electric companies in this country could produce a motor and drive it at a velocity of 200 miles an hour; but it would not be a commercial enterprise hence it is not likely to be done in the near fu-

ture. Several years ago a series of experiments were made for scientific purposes on the Berlin-Zossen electric railway in Germany, and a speed of 127 miles an hour was attained, but there was nothing extraordinary in it to people familiar with transmission-of-power problems.

But that a vehicle weighing less than 1,700 pounds should carry its own power and endure the strains necessary to drive it over two miles a minute is indeed marvelous.

The first day of the 1906 Florida automobile races promised that the perfecting, elaborating and adjusting of vehicles and mechanism during the last year would prove that the scientific labors had not been in vain. Mariotte, in a Stanley steamer, opened the high-speed ball by passing over a mile in  $32\frac{1}{2}$  seconds, or 164 feet per second. This speed would go over two uptown blocks in New York city every three seconds. As the races proceeded one mile in 40 seconds became commonplace, although it is 90 miles an hour and practically the limit of high-speed locomotive velocity. Before the first day closed the Stanley steamer bettered its record slightly, making a mile in  $31\frac{1}{2}$  seconds, at the rate of 166 feet per second.

The finishing day saw the climax of high-speed racing when first Mariotte ran over the two-mile course in 1.03 minute, which he bettered by covering the distance in  $59\frac{1}{2}$  seconds. This was, however, beaten by Demogeot, who ran the Darracq the two miles in  $58\frac{1}{2}$  seconds, or a little better than a velocity of 124 miles an hour, or 180.8 feet per second.

These figures indicate that there was remarkably small difference between the speed capabilities of well designed and properly made steam and electric cars. It is properly applied power that produces speed in any vehicle, so that given an equal weight and measure of resist-



ance a unit of power will produce equal speed.

There is nothing in engineering experience to compare with the velocity attained by the racing motors, except that of projectiles or of falling bodies. A body would require to fall over 500 feet to acquire the velocity attained by the automobile run by Mr. Demogeot.

But the capability of these racing machines is not confined to short spurts of one or two miles. An important event in the contest was the one hundred miles race which was won by Walter Clifford Earp with a 50 H. P., six-cylinder Napier car in 75 minutes 40½ seconds, a running speed of 79.5 miles an hour. A most remarkable incident of this race was that one of the tires collapsed and 63 miles of the distance was run on three tires and a rim.

Second to that performance was Emanuel Cedrino, who ran a Fiat over the distance in 76 minutes 39 seconds. The victory nearly came to this car, for it made the first forty miles in 25 minutes 6 seconds, an average of 95.7 miles an hour, and then was thrown back by a fractured tire.

#### Auto Legislation

When the locomotive became a factor in transportation it met with considerable opposition, as was expected, from those whose vested interests were affected by the changes incident to new methods. Legislative enactments, however, as a rule, were favorable to the establishment of railways. The establishment of the automobile as a potent factor in locomotion, however popular with the people, seems to have fallen upon evil times with our legislators. Whether it is that the individuals who worm themselves into politics, and, by ways that are dark, get elected to office, are deficient in moral sense, or whether it is that their experience in getting into place has had the de-

basing effect of sharpening their intellectual vision so that they can discern the sources afar off from which "graft" may come, certain it is that the various State Legislatures now in session look upon the automobile as a proper subject on which to introduce bills that a c. perhaps, as barefacedly of the "strike" variety as any that ever had the brazen-facedness to appear in print.

In Massachusetts a bill is before the lower house, calling for the continual ringing of a gong on every automobile in motion in that State. Should this become a law, the prospect is of the most agonizing kind. Doubtless ear-stoppers would come immediately into popular use. One does not require to be a prophet, however, to state that a little "hush" money will induce the withdrawal of this idiotic measure.

Michigan has a measure under consideration calling for drip pans under all automobiles running in cities and towns. Ohio has another measure calling for the sprinkling of oil upon the highways before the automobile comes along. The owners of the automobiles, of course, to pay for both schemes, so that an automobilist crossing from one State to the other would require to have his drip pans taken off and pay for the oil sprinklers before he could proceed any further. In both cases an accomplished lobbyist will pour oil on the troubled waters of the legislative mind in a way that will lay the dust naturally arising from such contradictory propositions.

The number and variety of bills affecting rates of speed are legion. Every town and village has its own enactments in regard to velocities, but it has been left to Washington, the presumed center of legislative intelligence, to contradict itself in these measures. The rate of speed allowed along one street differs from the rate allowed on another, as one star differeth from another in glory. This

variation may have its advantages, because there are times when a hot-headed citizen may be anxious to run to see the appointing clerk in a certain department, in the hope of securing some sudden benefit, and his reception may be of such a kind that it would be better to go back by way of N. G. street and have more time to think twice over the matter. In other cases it would be becoming for legislators to go the straight road to the halls of legislation, and on returning show that they were not entirely dead to all feeling of decency by being ashamed to come back the same swift way that they went in case that they might be cut off unreconciled to grace.

In New Jersey the feeling of "Jersey justice" ought to feel outraged in the proposed enactments now before the Assembly at Trenton. If these measures come into operation it will cost an automobilist two dollars the instant he enters the State. This is the same fee that is being paid now by emigrants from foreign countries. There will also be an extra charge of one dollar per day while the automobilist remains there. The Secretary of State must have his photograph. He must be over eighteen years of age, but he can be as old as he likes. He cannot sell or loan or exhibit an automobile until he has paid fifty dollars more. If, after passing all these tests, he proceeds to move his automobile, he must stop at once if any man, woman or child holds up a hand. If no one holds a hand up, then the constable can give him the hailing sign and he may be examined all over again, and then he can be taken before a Jersey Justice and have all the rights and privileges of an automobilist taken away from him forever, and sent to jail for sixty days. New Jersey is a small State, but it seems that automobilists will require no small sum of money if they dare to venture within its borders. If these measures come to pass it would be

better to buy an automobile after getting into New Jersey than risking the legal dangers in taking one there. In spite of these threats, however, we are not without hope that the strong common sense of the American people will rise equal to the occasion and give automobiles the same rights and privileges as other vehicles.

#### **The Good Roads Bill**

The Good Roads bill now before Congress is not only one of the most important measures that has been introduced during the present session, but it involves more directly the general welfare of the country than any other proposed internal improvement in many years. It has been generally assumed that good roads was a matter affecting only the welfare of the farmer. This is a gross error. The condition of the common highways materially affects the railways, and the railways affect the general prosperity of the country. Unless the highways are in fairly good condition the farmer cannot conveniently get his produce to the market, with the result that a partial suspension of traffic occurs, bringing inflated prices to the consumers and a corresponding congestion of traffic, with little or no reduction of prices, at other times. It would be difficult, indeed, to trace the far-reaching results of bad roads, the depression in local trade, the partial paralysis of wholesale trade, with the pernicious extension of credit system. As a result of the impassable roads in America the farmers have been in a large measure compelled to move their entire crop to the cities in the fall of the year. Hence the creation of an army of middlemen, produce dealers, that fatten on the helpless public and the equally helpless farmers, who are unable to realize the best prices in the best market.

The plan proposed in giving aid to the several States is similar to what has ai-

ready been begun in New York State, whereby the State pays to each township 50 per cent. of all the money each town will raise for road purposes. It is to be regretted that not half of the townships have seen fit to avail themselves of the statutory allowance, the beggarly districts preferring to wait in the hope of getting something for nothing. Should a comprehensive measure be adopted by Congress, the matter would be taken out of the hands of the short-sighted township authorities and every State in the Union would undertake highway improvements and a State tax would be imposed on the beneficiaries of the wise measure to make up the quota of the necessary expenditure.

It may be stated that in New York State nearly 1,000 miles of macadamized roads are now completed. More than 4,000 miles of roads similarly equipped would be necessary to furnish even limited means of transit through the agricultural districts. Seven other States have passed measures of a similar kind, but generally speaking, the work may be said to be just beginning, and it is a singular travesty on the high intelligence of the American people that there is no country in Europe so deficient in common highways as America is, except, perhaps, in some of the steppes of Russia, where the population is thinner than it is in Nevada or New Mexico.

#### **Speeding Courses**

There is such tremendous temptation for an automobilist who has great speed possibilities under his hand to exceed the limits imposed by the law that speedways ought to be established where people of high-velocity proclivities could relieve their passion for running at the extreme capacity of their automobiles. This is done very frequently with impunity on solitary country roads, but it is not fair to the other users of the roads.

There are movements in various countries to establish semi-public speedways for the use of automobiles, and the tendency ought to be encouraged. There are so many rich men owners of automobiles with proclivities towards the exciting enjoyment of high-speed racing that there ought to be no difficulty in raising the money necessary to establish speeding courses.

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#### **To Raise Automobile License Fees in Massachusetts**

Motor car drivers, owners and dealers in Massachusetts are viewing with considerable alarm a bill introduced by Representative McManus, of Natick, relative to the registration and licensing fees of machines.

At the present time the fee for registering a motor car is \$2. It is a modest enough fee, it is true, but, considering that there are now close to 12,000 cars in the State, it turns in a pretty good bit of revenue.

Now McManus from this makes a sudden jump. He would make the registering fee for motor cars and motor cycles \$20, and the license fee for operating the same \$20.

Introducing this bill will give Representative McManus some cheap notoriety, which is all that he can expect for the annoyance caused.

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#### **Progressive Discussion**

It is amazing how, year after year, the general discussion changes ground on the automobile. A few years ago those who came to buy and those who simply passed by at the automobile shows were pleased with the rich upholsterings. Two years ago it was ball or roller bearings. Last year it was springs and tires and methods of lubrication. This year, both at New York and Chicago, buyers spoke of cylinders and ignition and tensile strength.

Next year it will likely be compression and the crystallization of metallic molecules. We certainly owe much to the automobile in awakening such a keen interest in mechanics. It is a great educator.

Until this year it has been the fashion for rich people to look down upon American-made automobiles, just as American-made dresses are despised by fashionable women. But the result of there having been two shows in New York this year is that some millionaire members of the Automobile Club of America are now buying American cars, though they never before would have anything but imported machines. As members of the club, these men felt obliged to support its show, and, going there frequently, they got to studying the domestic product as they never had done previously, and so became converted into purchasers. Americans have always excelled in mechanical productions, and the automobile will be no exception.

Those who have studied the extent of the world's capital in the way of fuel and iron ore cannot help thinking that the present generation of mankind are paying little attention to the needs of the coming sons of man. Dr. Kenneth Leith, lecturing recently in Chicago, estimated that the world's supply of high-grade iron ore would not last more than a century if drawn upon at the present rate of consumption.

#### Reo Physician's Vehicle

This is a new design of automobile specially intended for the use of physicians, with whom it is likely to become popular. It is quite a powerful car, having two cylinders capable of developing 16 H. P. This car is equipped with the same engine as the five-passenger Reo light touring car and the ten-passenger Reo wagonette, the former having performed so creditably in the various hill-climbing, endurance and economy contests which it entered during the season



REO PHYSICIAN'S VEHICLE

of 1905, while the latter won three first prizes in the New York Motor Club's six-day national economy contest, for least total cost, the best economy record, and for least gasoline consumption.

This model meets a long-felt want of the average physician, as well as business and professional men, for it has ample power to negotiate the steepest grades and roughest roads in all kinds of weather, while it may be converted in a few moments into a luxurious and speedy light touring car, accommodating five passengers comfortably.



### Theories About Power and Resistance

A so-called technical expert of high standing in the British Isles lectured recently on automobile racing problems and made some statements that were more in the nature of wild vagaries than facts based on engineering data. He said that if a car was required to travel 114 miles an hour in a race it would be necessary to develop 234 H. P. At 71 miles an hour it would require to develop 57 H. P.; at 50 miles an hour, 20 H. P.; at 32 miles an hour, 5.2 H. P., and 21 miles an hour, only  $1\frac{1}{2}$  H. P., to overcome wind resistance alone. Put more graphically, the lecturer stated that if the car was driven over a precipice it could only fall at the rate of 200 miles per hour, because at that pace the air resistance would exactly counterbalance its weight.

This is mere idle speculation unworthy of being placed before intelligent people. There is nothing of an accurate character known about the resistances obstructing the movement of high speed vehicles. Thirty years ago the writer made a series of tests on locomotives and found that they hauled trains that the engineering text books, accepted as authority, indicated to be impossible. The process of enlightenment that followed led to changes in the rules for train resistance printed in the text books, but they are still based on intelligent guessing. That condition of uncertainty about the resistance of trains and locomotives is much more pronounced with automobiles. It is believed by some that making an automobile conform to the shape of a turtle will produce a vehicle offering the minimum air resistance, but there is no proof that this theory is correct.

Before beginning to make up the March number of the AUTOMOBILE MAGAZINE we sent out a circular notice saying that we would be glad to notice automobiles and automobile accessories that were new and worthy of being brought to the attention of readers of the AUTOMOBILE MAGAZINE. Among the most ardent responses were piles of literature from manufacturers who protest to all agents that they do not believe in advertising.

Although the Winton racing machines will never again appear on the road or track, the thin "Bullets" have not been entirely dismantled. These speed monsters are preserved in the museum at the Winton factory along with the single-cylinder models of strange appearance with which Mr. Winton experimented years ago.

Louis Chevrolet, the well-known facing man, has joined the Douglas Andrews camp and hereafter will look after the mechanical end of the Bliss cars. Both the Berkshire and Bliss cars are selling well, and it is rumored that another announcement of interest to the motoring world will shortly be made by the Bliss company.

The Baker Motor Vehicle Company, of Cleveland, has moved into its new plant, which has been under construction for some time. It is one of the largest and best equipped factories in the country, which is all the more noteworthy inasmuch as it is devoted exclusively to the manufacture of electric vehicles.

The large number of electrics which are to be seen daily on the streets indicate that merchants are coming to realize the greatly reduced cost of maintenance of electric trucks and wagons over the expense of keeping horses, as well as the enormous saving in time and labor.





## For Women Who Motor

By A. Lenalle



This department is conceived with a view to presenting distinctive features that are of special interest to women motorists, and is open to contributors for the discussion of all timely topics in this line.



As an interested participant in all pursuits, sports, pastimes and other movements rightfully appertaining to the short-skirted New Woman of the day—and most of the

foibles of the long-skirted ones (poodles, bridge, and mechanical musical instruments excepted)—I have everywhere encountered club organizations, devoted to each and all of these purposes. So, when motoring came to the front, as the latest development both in the line of sport and utility, I hailed the founding of the London Automobile Club

for Women as simply the most natural and welcome outcome of the generally aroused interest and enthusiasm attaching to this new form of locomotion; and I fully expected to see this enterprising example speedily followed by American women, who are not inclined to take second place in anything to which they de-

vote their attention; but I have been woefully disappointed. No such club has been opened in any of our large cities.

Finally my poignant concern on this point took the form of active investigation and, quite recently, having in vain tried to induce some experienced and non-fearing woman motorist to speak, *ex cathedra*, on this subject, I interviewed "The Secretary." "Why don't they have an automobile club here, like their English sisters?" I asked aggressively. "Probably 'cause their husbands won't let 'em," he responded—vernacularly and oracularly—which was a



THE FAVORITE LANDAULETTE  
Wood's Motor Vehicle Co.  
A MARCH COSTUME—Scandinavian Fur Co.

perfectly natural case of mistaken conclusion on the part of a *bachelor*. Then, settling down to a serious consideration of the case, he summed up the cause as hinging on the congested traffic conditions in large cities, which are so extreme that, on account of the great hazard attaching to such an at-

tempt, the number of women who personally operate machines is too small to serve as a nucleus for club organization.

Yet I am informed that there is a marked predisposition on the part of women, both here and abroad, to indulge in aerial flights, which shows that the element of danger is, to them, a determining factor for, rather than against, participation in any new sport they favor. For, in the avenues of the world above are encountered unseen voyagers and vehicles that give no opportunity for sudden retreat, nor any warning signal of approach—unlike the enterprising French mechanic who has attached a phonograph to his machine that signals "Hop! la!" to all threatened humanity. The French balloonist, Charles Levee, who so recently met with some exciting adventures in connection with these aforesaid wind chariots in mid-air, and landed unexpectedly and ignominiously, so it is rumored, on the chimney-pots of a hospitable farmer, near Hurley, could, if he would, verify the excess of danger attaching to air traffic as compared to that of earth traffic under any conditions. So there still remains the question as to why women motorists have not sufficient interests in common to act as an incentive for the founding of an artistic and completely equipped club house that shall number among its members all the prominent leaders in this movement. If, as "The Secretary" further explained, the primitive instinct that causes men to unite against a common danger that assails them—which, in the case of automobiling, assumes the form of inimical legislation against the rights of motorists—is really the specific cause of organization among them, and the chief thing that holds them together, why should it not act as a similar incentive for women to combine, since their interests are parallel in this case, and the voice of Woman is heard to advantage in this land?

It is this concerted action, for mutual interests, both in large cities and in suburban districts, that we hope to further by voicing the opinions and observations of women motorists, in this department. Even if this spirit of organization finds expression—as would, perhaps, be more practical for the present—only as an adjunct to the country clubs that form a common center for all the varied sporting interests of their clientele, there are many personal experiences and incidents that, if narrated publicly, would mutually help and enlighten the promoters of this movement while in its experimental stage.

Many women prominent socially, here and abroad, have become active factors in all motoring functions, either by cooperation with their male representatives or as active participants; and we intend to be in such close touch with all these leaders that our pages shall be an authoritative chronicle of events, either in isolated cases or in an organized form.

We shall welcome communications on any points that are of general interest; notes of touring parties, difficulties encountered and surmounted, new devices for comfort or security, and all good photographic matter in connection with any of these things. All information or suggestions relating to proposed organization will be specially welcome, for, although we do not, as yet, figure as conspicuously in the automobile world as our sisters across the water, American women are not wont to be left in the background, and are sure, eventually, to lead in this, as in other undertakings to which they turn their attention. Already they have been prominent in touring, and even in some of the more recent contests that have demanded nerve and endurance.

It is generally conceded that the limitations of women in the motoring field are not those of spirit, and that, with bet-

ter roads, more favorable legislation and the inevitable improvements in mechanical construction that will reduce the difficulties and dangers of operating a machine to a minimum, the maximum of women's possibilities and activity in that line will be far beyond the present mark.

**Notes on Advance Styles in Machines, Costumes and Novelties Specially Designed for Women Motorists**

Landaulettes, which are a combination of the victoria and brougham, are the most popular form of electric vehicles on the market this season. They are particularly designed for the use of women in the city, where a chauffeur—or driver ("you takes your choice")—is deemed necessary. This elaborate model originated in France and has become the vogue among Parisian women. From that side of the water to this, of course, is but a step, where a woman's fancy is concerned; and it is now as much in favor here as there.

In stormy or cold weather, with closed top, it constitutes a brougham, protecting the occupant completely; but for driving in the parks, or for any trip in pleasant weather, by a simple manipulation of a mechanical arrangement, which is very easily and quickly adjusted, the top is lowered, making a perfectly appointed victoria, as seen in this illustration. Thus, Milady, having finished her errands in the city and donned a garment and head-covering like those shown in cut, which are eminently suited to this mid-season of March winds and dust that do so disarray one's hair and begrime the toilet, is now ready for a park drive or any country spin.

Maxine Elliott was one of the first to take advantage of this innovation. She has a beautifully appointed landaulette similar to that herein reproduced, for her personal use. There can be no question as to the popularity of these vehicles for women's use for shopping, or other social or business functions, as there is

little pleasure to be derived from driving one's own car through crowded thoroughfares in large cities, especially in New York; and the ease and smoothness with which these vehicles move is beyond criticism.

The garment reproduced on figure is



LATEST MID-SEASON GARMENT

Courtesy of Saks & Co.

an Empire coat of silver-gray satin-gum, piped with red, the neck and sleeves faced back with white glacé leather. It is semi-fitting and lined to the waist with white satin. Two deep folds at the front and back give somewhat the effect of wide box-plaits, and white straps hold the fulness in at the sides. The sleeves are very full at the top, finished with a deep, fitted cuff, and the skirt is cut with the full flare that is a feature of the new spring coats. Big buttons of nickel and

pearl fasten the front flaps. The motor-ing cap is of the same material, with a detachable cape, and completes a jauntily becoming, and at the same time service-able, costume.

In the evolution of artistic and dur-able garments for automobilists, leather has proved a most valuable factor. The preparation of Danish leather has reached such a state of perfection that it is not only soft and flexible when made up, but no amount of exposure to wind and weather will harden it. It is treated with oil and is prepared abroad, a large por-tion of it being imported from Scandi-navia. The stock garments are made up on the other side, but many skins are also brought over for use in custom work. The price of these garments is graded according to the quality of the leather and the design of the model, and fits all purses—for automobiling has become the sport of the moderately well-to-do, as well as of the wealthy. Shaved calf-skin, thus treated, is used very effectively in some of the newest garments.

Two-piece suits are sometimes more convenient than the long coat, and are shown in a variety of colors this spring. The coats are silk-lined, but the skirts, of course, are unlined. Leather suits are now actually designed to match the shade of the motor, if desired—green, maroon, and all shades—and, most artistic of all, pure white leather to harmonize with a "White Flyer." This leather is easily cleaned and does not spot with water, so these garments are not so non-utilitarian as might appear at first sight.

The coat shown on page 189 is of changeable brown and red satin-gum, and is an advance spring model just re-ceived by a New York house that car-ries the largest and most distinctive line of automobile goods in that city. It has a soft, silky sheen that is very attractive, and the cut is a good forerunner of com-ing styles. From a deep, pointed yoke

which fits smoothly over the shoulders, the garment falls in soft, graceful folds to the feet, completely covering and pro-protecting the gown worn beneath it. The sleeves are very full at the top and fin-ished with a deep cuff of the material. The coat is unlined, is absolutely dust-and rain-proof, and is very light and comfortable for summer wear. A beauti-ful garment of this kind may be pur-chased from \$75 up.

Sleeves for the coming season will be quite full at the top, growing much smaller below the wrist, most of them finished with deep, fitted cuffs.

For the warmer weather a soft, lus-trous silk-rubber is much used, also pon-gee and light cloths, so treated that they are water-proof and spot-proof.

A clever device shown among spring novelties is a combination of veil and goggles that is very convenient. The goggles are attached to the veil, so that when it is properly adjusted the goggles are in position. They are less clumsy-looking than the veils with a large, un-divided eye-piece of mica or celluloid at-tached, which have hitherto been used; yet some of these, the mica curved round by handsome white lace, give a fas-cinating oriental effect to their dark-eyed wearers.

Collapsible goggles with two sets of glasses, one plain and one smoked, are very convenient, for on an unusually bright day when the sun's glare is most trying, the smoked glass may replace the plain. This device of substituting, as de-sired, saves the trouble of carrying two pairs of goggles.

Also, Yetta skin, which was one of the leather novelties last season, is now used in some of the new goggle-masks. It is rather effective, and is certainly durable.

There is a new paste, or, more prop-erly speaking, a soap, which, if rubbed over the glasses, is said to render them



completely steam-proof. Cylindrical-shaped cakes are put up in tin boxes which are easily carried. This should be very useful to tourists.

Now, before closing, I'd like to settle the much-mooted question that so agitates the public at present—whether chauffeur or driver is to be the preferred term for American usage. I don't know of any word in the French language that has ever been so maltreated or chewed up, and I vote that we carefully pack the poor, mutilated article in cotton and send it back to France by the first steamer, with profuse thanks. They have, indeed, been very kind to let us have the use of it so long; and now that we have found something as a substitute let us release this poor exile, whose own countrymen would fail to recognize it in its changed garb. So, be they trucks or motors, let them hereafter be driven or operated by drivers, when on American soil.

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Address all communications to Editor, Woman's Department.

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#### **Exemplary Use of an Electric Runabout**

Mrs. Winthrop E. Scarritt, who is here shown riding in her electric runabout, is an enthusiastic automobilist and has displayed her love for guiding the horseless steed by running it more than 17,000 miles without meeting with a single accident. We believe that she is the champion lady automobilist in America. Her husband is a past president of the Automobile Club of America and certainly has done more for sane automobile interests than any man in the country.

Mrs. Scarritt makes exemplary use of her electric car. In the morning she takes her husband from the house to East Orange station, then she re-



MRS. WINTHROP E. SCARRITT IN ELECTRIC RUNABOUT

turns in time to take the children to school. After that she goes to the various stores, ordering the day's provisions. In the afternoon she goes to her mother's residence, three or four miles away, and visits or takes out her parent for a ride. By the time that is done it is time to take the children home from school, then Mr. Scarritt has to be met at the station on his return from the city. If they wish to go calling in the evening, the runabout is always ready for the party, so they go and come in comfort and in peace.

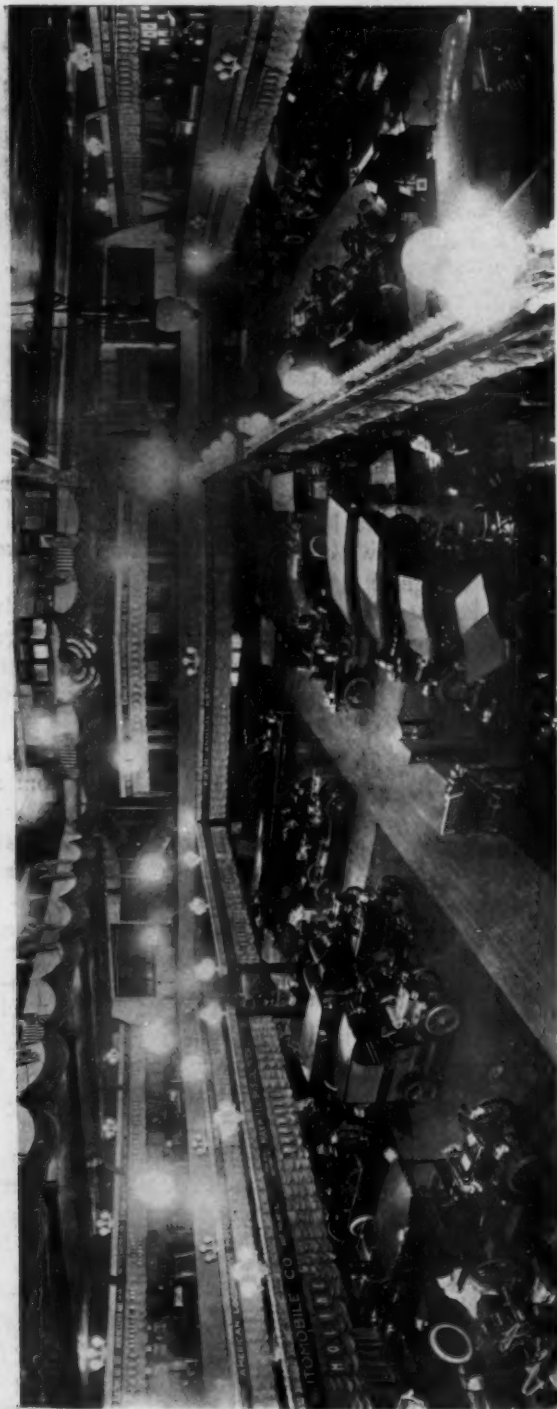
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The ingenious mechanic who makes miniature steam engines that can be mounted on a silver dollar has turned his attention to the automobile, and the miniature automobile is becoming a regular feature of shows. Many of these miniature reproductions have been accurate and elaborate in design and finish and some of them have been pretty costly.

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"The Hyatt Bearing" is the title of a handsome "bulletin" published by the Hyatt Roller Bearing Company, Harrison, N. J. Sent free on request.





CHICAGO AUTOMOBILE SHOW IN FIRST REGIMENT ARMORY

### Chicago's Automobile Show

Chicago's 1906 automobile show will go down in history as the most successful commercial exhibition ever held in this city, or, for that matter, in the United States. It was the only national motor car exhibition of the year, being a consolidation of the two recent New York exhibitions, including the best features of those two shows and almost surpassing them in the list of exhibits.

When Samuel A. Miles held the first automobile show in Chicago in 1899 little did he or the mere handful of manufacturers who exhibited think that in 1906 a record would be established by what afterwards became the annual automobile show.

Congratulations to Mr. Miles and all of the officers and directors of the National Association of Automobile Manufacturers under whose auspices the exhibition was held. It was a beautiful and comprehensive display of all the features that comprise the make-up of the latest improvements in automobile manufacture.

The show opened on Saturday afternoon, February 3, and closed on Saturday evening, February 10. The official attendance for the seven days was 263,000, the crowds ranging from 30,000 to 50,000 daily. Of the 240 exhibitors 100 were manufacturers of automobiles and 140 exhibitors of parts and accessories. Every available space in the Coliseum, Coliseum Annex and First Regiment Armory was utilized. It was the first time the show was held under two separate roofs, but on account of the large demand for space it was found necessary to press the Armory into service.

At first Mr. Miles was at a loss to find a way to connect the two exhibitions so that both could be seen for one admission. The matter of eliminating a system of duplicate tickets was mastered by the erection of a 300-foot covered walk,

well lighted, connecting the two buildings. This tunnel-like walk was crowded at all times and furnished the proper solution to the problem.

The holding of the show under two roofs, however, was not altogether satisfactory to the exhibitors in the First Regiment Armory, which is the smaller of the two buildings. Most of the visitors entered the show at the Coliseum and, on account of the time spent in this structure, did not visit the Armory. For that reason it is probable that next year the show will be held under one roof. There is only one building in Chicago which would accommodate an exhibition of the proportions of the automobile show, but it is located at the Union Stock Yards, several miles from the center of the city. The structure, which is known as the New Exposition Building, was erected last fall by the International Live Stock Association, and is said to be the largest exposition building in the world. There are several hundred thousand feet of floor space available, and it would seem that this structure will have to be taken next year, unless in the meantime some measures are taken to erect a larger building closer to the center of the city. The dates for next year's exhibition are February 2 to 9.

When nearly three hundred thousand hustling fortune-hunters in an overgrown prairie town find time in a single week to inspect a display of still-life mechanism, even though the ambitious press agent had underestimated rather than overworked his imagination in his "million-dollar entertainment," it may be safely inferred that the show was plastered with the stamp of public approval.

Chicago is notable for big efforts, comprehensive approval or criticism, stupendous results; and that the automobile show of 1906 should have surpassed all previous exhibitions by a margin wide

enough to embrace still greater plans for next year, is a source of congratulation to every loyal citizen, whether he be taxed for a garage filled with high-g geared touring cars, or derives his exercise in furnishing motive power for a wheelbarrow.

Rich or poor, old or young, pessimist or optimist, every citizen of the Windy City is gratified in the knowledge that Chicago's latest effort is the greatest effort, not only in entertainment, but in educational aspect, that the progressing West has ever consummated.

What shall it profit the Westerner whether the New York show was more complete, more artistic, a better nest-egg for sales, or the scene of more tuxedo coats and evening gowns? Mayhap the statement is only partially true at best, and why quibble over straw-drawn comparisons when the show conducted in the home town not only satisfies us but fills our hearts and minds with contentment?

But in what particulars did the visitor find food for enthusiasm? What was there about a mere display of vehicles that could arouse effervescence in the blasé dollar-chaser of this sordid metropolis? Why did many of the spectators return again and again to the Coliseum and Armory during the week?

These questions, of course, are never advanced by the up-to-the-minute man, whether of Chicago or of Hyannis, Mass., for he has long since passed the epoch when "to place tacks in the path of a bicycle advertised him as a humorist." In this era of advanced necessity the requirements of speedy and comfortable locomotion tend toward a kindergarten course in engineering, and it is indeed a dull scholar who cannot parse the myriad terms of "autopuk," from air-cooled cylinders to zig-zag mountain tours.

It was indeed a wise audience which

assembled daily to inspect, admire and criticize the vehicles and accessories at the twin-show, but there was nevertheless much in the allied display of the mechanic's art which made the show a post-graduate course for experts.

Nearly a third of the three hundred complete cars exhibited in the Chicago show were from the factories of Western concerns which did not exhibit in New York, and many of the basic principles involved were of interest not alone to the layman, but to inventive, competitive manufacturers. So great, indeed, was the demand for space that 15,000 feet in excess of the 112,000 feet utilized in the Coliseum and Armory, and inquisitive experts were constantly discovered in an examination of vehicles which could be shown only on the streets surrounding the exhibition halls.

Manufacturers of commercial vehicles were particularly unfortunate in securing show room, and one of the strongest features of the show thereby received but a small part of what its merits deserved.

Still another phase of the show which attracted comparatively small attention from the layman was the department of accessories. Situated in a heaven-inclined balcony "far from the madding crowd's ignoble strife" about the booths below, full many a spectator scanned the steep stairways and took the press agent's word for the many interesting attractions of the upper story. Interested manufacturers, however, were constantly to be found in deep study of this or that novelty bidding for popularity as a first aid to comfort or necessity, and the reported sales of accessories compensated largely for the scarcity of idle observers in the balconies.

Accessory booths, however, were not the only meeting places for rival manufacturers and officials. The spirit of bonhomie and absence of rivalry so

characteristic of the automobile industry was in evidence during the span of the show, and visiting back and forth from booth to booth was a pleasant phase of the exposition.

It was either a very early or a very late hour when rival members of the trade could not be found cosily nested in a third competitor's limousine, lost in a discussion of this or that type of "cooling," and when the exhibition halls were closed the association still continued at downtown cafés or hotel lobbies.

members of the exhibition committee are receiving hearty commendation for the manner in which the greatest automobile show in history has been handled. Not an incident marred the show, and the general expression of approval from both exhibitor and spectator must be the most fitting reward for managerial effort.

Firm in the belief that the artistic side of previous automobile shows had suffered in comparison with horse shows and other large conventions of a trade nature, Manager Miles secured this year



SILENT, SWIFT, STEADY, STEAMERS STAND

An equal spirit of good-fellowship was evident wherever two or more lay spectators were gathered together, and no better evidence of the future prosperity of automobiling, either as a pastime of princes and a prince of pastimes, need be desired. In the healthy competitive atmosphere among both manufacturer and purchaser one finds the excuse for the further development of detail in mechanism and of luxurious completeness which is to be brought forward in time for next year's national show.

Manager Samuel A. Miles and fellow

the most renowned designer and contractor of interior decorations in the United States, Paul Bonet, the distinguished former Parisian, who has adopted this country as a home, was given carte blanche in the matter of color and design, and the results obtained inspired the highest praise from an astonished public. Never before has the Coliseum presented such an attractive view, with its staff work wrought in a design suggestive of the automobile industry; its beautifully blended drapings of gold and green; the delicately arranged minor

shades of the ceil drapes; making an ensemble of exquisite taste suggestive of spring festivals at Madrid or, perhaps, Venice.

Already Manager Miles is casting about for novel features for next year's show, but whether he can surpass this year's effort is a question in the minds of his most ardent friends. Certain it is, however, that the exhibitors will produce examples of the vehicle builder's art which will astonish visitors at the show of 1907. Splendid development is promised along lines of mechanical perfection, luxury of finish and detail of comfort. Nobody will be surprised if the elaborate car of next season embraces sleeping facilities, buffet privileges and observation features equaling if not surpassing the palace cars of the most progressive railroads. In many essentials the modern motor vehicle's lavish detail has surpassed its competitor of the rail, and another year will certainly show much which is now but a dream.

As in New York, the sensation of the Chicago show was the \$500 Ford runabout. The Ford booth in the Coliseum was crowded at all times. In fact, the aisle became so congested at times that it was necessary to keep a detail of police on hand to keep the passage open. The large business done in Chicago, with that in New York, already insures the financial success of the runabout for the 1906 season.

The Orient buckboard was the cheapest car on sale at the show, selling for \$400. The machine found a good sale among out-of-town buyers, particularly farmers, who find the vehicle excellently adapted to country roads.

Other cars ranging in price from \$650 to \$800 which found liberal purchasers were the Olds \$650 one-cylinder runabout, the \$650 Reo one-cylinder runabout, the \$650 Holsman runabout, the \$650 Northern runabout, the \$675 com-

bination Reo one-cylinder runabout seating four persons, the \$750 Cadillac Victoria runabout, the \$750 Wolverine individual-seat runabout, the \$750 two-cylinder Mitchell runabout, the two-cylinder \$750 Pierce-Racine runabout, the \$780 "Maxwell Tourabout" runabout, the \$800 semi-racer Wayne runabout, and the \$800 Queen two-cylinder runabout.

While the spaces in the Coliseum were the most desirable on account of the crowds that poured into the big structure, many of the visitors spending so much time in this building and the Annex that they did not visit the First Regiment Armory, the exhibitors in the latter structure, most of whom were those who had applied late for exhibiting room, found so much demand for their vehicles that they did not notice the difference in the attendance.

Automobile manufacturers who had spaces in the Coliseum were the Apperson Brothers Automobile Company, the Autocar Company, the Baker Motor Vehicle Company, the Bartholomew Company, the Cadillac Motor Vehicle Company, the Corbin Motor Vehicle Company, the Duryea Power Company, the Electric Vehicle Company, the Elmore Mfg. Co., the H. H. Franklin Mfg. Co., the Ford Motor Co., the Haynes Automobile Co., the Holsman Auto Co., T. B. Jeffery & Co., Knox Auto Co., Locomobile Company of America, Mitchell Motor Car Co., Maxwell-Briscoe Motor Car Co., National Motor Vehicle Co., Northern Mfg. Co., Olds Motor Works, Packard Motor Car Co., Peerless Motor Car Co., the George N. Pierce Co., Pope Motor Car Co., Pope Mfg. Co., Premier Motor Mfg. Co., Reliance Motor Car Co., Royal Motor Car Co., the F. B. Stearns Co., the J. Stevens Arms & Tool Co., the St. Louis Motor Carriage Co., the Studebaker Auto Co., the E. R. Thomas Motor Vehicle Co., Waltham



Mfg. Co., Wayne Auto Co., White Sewing Machine Company, Winton Motor Carriage Co., and the Woods Motor Vehicle Co.

Automobiles were shown in the Annex by the Auburn Auto Co., the Austin Auto Co., Buick Motor Car Co., Chicago Auto Mfg. Co., Jackson Automobile Co., Nordyke & Marmon Co., Pierce Engine Co., Pungs-Finch Auto & Gas Engine Co., Tincher Auto Co., Vehicle Equipment Co., the Welch Motor Vehicle Co., American Motor Car Co., Aerocar Co., A. C. Banker & Co., Columbus Buggy Co., Chicago Pneumatic Tool Co., De-

Co., Knight and Kilbourne, Kansas City Motor Car Co., Logan Construction Co., Lozier Motor Co., Oscar Lear Automobile Co., H. S. Michaels & Co., Moon Motor Car Co., Marion Motor Car Co., Maxwell-Briscoe Motor Co., Moline Automobile Co., McCrea Motor Truck Co., Palais De L'Automobile, Panhard & Levassor, Reo Motor Car Co., Rapid Motor Vehicle Co., The Rainier Co., Synnestvedt Machine Co., Smith & Mabley, Inc., Soules Motor Car Co., the Ralph Temple Auto Co., and the Western Tool Works.

Among the marked features developed not alone by the Chicago exhibition but



PACKARD'S OUTSIDE CHICAGO SHOW

troit Auto Vehicle Co., Dorris Motor Car Co., Gearless Transmission Co., Grout Bros., Auto Co., Harrison Wagon Co., Mercedes Import Co., and the Windsor Auto Co.

The following exhibited automobiles in First Regiment Armory: The Adams Co., Acme Motor Car Co., Auto Importing Co., American Locomotive Motor Car Co., American Motor Truck Co., Archer & Co., Buffalo Electric Carriage Co., Buckeye Mfg. Co., C. H. Blomstrom Motor Co., Berkshire Automobile Co., Cleveland Motor Car Co., John L. Dolson & Sons, Daimler Mfg. Co., Dayton Motor Vehicle Co., English Daimler

also by the recent New York shows, and one that will be talked of and discussed at the shows to be held in other cities this year, is the demand for higher-powered cars. The six-cylinder vehicles are taking the place of the four-cylinder cars, and it was a noteworthy fact that many automobile enthusiasts have forsaken the four-cylinder for the six-cylinder machines.

It is safe to say that every enterprising automobile concern in the United States will manufacture a six-cylinder model next year. At present only five American firms are turning out cars of this power, namely, the National, Franklin,

Stevens-Duryea, Frayer-Miller, and Ford. Of these the cheapest is the Ford, which sells for \$2,500. The weight of the car is 2,000 pounds. The car seats five persons and has a gasoline capacity for 200 miles. The motor is water-cooled and develops 40 H. P.

The six-cylinder Frayer-Miller sells for \$4,000. It contains a motor which develops 35-40 H. P. and is air-cooled by direct blast around cylinders. The car weighs 2,500 pounds and seats five persons, having a double side-entrance tonneau.

The National and Franklin six-cylinders also sell for \$4,000. The National is water-cooled, while the Franklin is of the air-cooled type.

The National is the largest of the six-cylinder cars manufactured, having seating capacity for seven persons. The motor develops 50-60 H. P. The car weighs 2,900 pounds. The Franklin develops 30 H. P. and weighs 2,400 pounds.

One of the most comfortable features about motoring is the smooth, noiseless carriage and the ability of a machine to carry a load without unnecessary straining of the gears. All of these luxuries are provided in the six-cylinder type of car, and for that reason as well as for others the six-cylinder will make the four-cylinder car next year what the two-cylinder machine has been at past shows.

The Kansas City Motor Car Company announces that next year it will manufacture a six-cylinder car. It is the intention to start at once on a model in order to have it completed in ample time for 1907 business. It is safe to say that every automobile firm which aims to get the best of the business will follow suit.

The 1906 show will go down in history as the most successful from a financial standpoint ever held in Chicago. It was a manufacturers' show in every respect. He not alone shared in the profits

of the exhibition, but also found customers in round numbers, and it was a well-known fact that not one had fault to find with the week's business. The total sales were estimated at \$7,100,000. It would be difficult to pick one concern which got the bulk of the business, as it was so well distributed that all of the exhibitors shared alike in the prosperity.

The foreign cars came in for a good share of the business and all who exhibited the handsome, high-priced motor vehicles from across the pond said that they were well pleased with the business done. Some of the foreign exhibits did little actual business so far as the disposition of cars was concerned, but the prospects booked were figured in the general resumé in sizing up the profits of the exhibition.

Of the cars ranging in prices from \$5,500 to \$6,000, the four-cylinder water-cooled Packard did perhaps the largest business, selling fifty-nine of the sixty-five cars available. The Packard sells for \$5,600 and is of 24 H. P.

The Berliet, which is manufactured by the American Locomotive Automobile Company, of New York city, for a new concern, according to James Joyce, who had charge of the exhibit, did an exceptionally large business and its booth in the First Regiment Armory was constantly filled with prospective purchasers. The Berliet four-cylinder 24-30 and 40-50 H. P. machines made their debut in Chicago for the first time, and as a result machines of this make will be seen on the Chicago thoroughfares in large numbers the coming season.

Among the other high-priced cars which met with good sales were the Austin, De Leon, Woods, Lozier, National, Tinch, Simplex, and American Mercedes.

There is a feeling that the automobile show is held a bit too late to turn out the orders for spring delivery. It is con-

tended that if the exhibition was held in the fall of the year that the factories would have all winter to work on the orders taken at the show and better workmanship and more attention to detail would result. As it is now, most of the larger factories will have to work night and day in order to have the orders ready for delivery when the automobile season proper opens.

The argument that it would be almost a physical impossibility to hold the show in the fall on account of the lack of models for the coming year is not considered by the busy factory men who must rush through the work of supplying cars on short notice. It is contended that an earlier start could be made on designs and the models could be ready in the fall just as well as in mid-winter. "It is only the custom to hold the show in February that brings the exhibition dates in that month, and it makes a lot of difference in the output, as, if the show were held earlier, it would be possible to ascertain just how many cars would be necessary and the output could be regulated accordingly," is the manner in which one of the supporters of the early-show idea explained it.

#### **Profit from By-Products**

A few years ago an investigation was made of the profits made by gas companies that supplied a great American city with lighting gas, and it was discovered that the by-products of the coal that were used for conversion into gas more than paid the whole expenses of the company. It is to be presumed that all other gas companies use up the by-products of the coal in the same profitable manner.

The advantage accruing to the community from the saving of what used to be worthless material is one of the triumphs achieved by the science of chemistry. Coal tar, one of the by-products of gas

making, used to be considered a worthless liquid, difficult to be got rid of. Now the elements that composed that malodorous stuff are separated and converted into very valuable articles of utility and luxury. The first derivatives from the distillation of coal are coal gas, gas liquor, coal tar and coke. From the gas liquor are derived ammonia and sulphate, chloride and carbonate of ammonia. The coal tar is split up into oils lighter than water or crude naphtha, oils heavier than water, such as creosote and pitch.

From the coal tar comes an endless variety of combinations. The greatest industry based upon their use is the manufacture of dyes, there being over 600 different coal tar colors in use. Most of the beautiful new colors used in the arts are derived from coal tar, and some of them are so expensive that only very rich people can buy them. Many medicinal preparations come from the same source, while pitch for paving purposes is one of the commonest products.

#### **Failure**

"Very frequently," says a New York lawyer, "there is an element of unconscious humor in the findings of a jury. To my mind, the best I ever heard in this connection was the verdict brought in by a coroner's jury in Michigan, who were called upon to pass upon the case of a sudden death of a merchant in Lansing.

"The finding was as follows: 'We, the jury, find from the physician's statement that the deceased came to his death from heart failure, superinduced by business failure, which was caused by speculation failure, which was the result of failure to see far enough ahead.'"—Harper's Weekly.

The only female tragedies are not those who have loved or lost. Some of the worst tales of misery the world knows come from the maid loving and getting the object of mistaken romance.

### Fixing It Up

An automobilist who was touring through the country saw, walking ahead of him, a wayworn man, followed by a mangy dog. As the machine drew near them the dog started suddenly to cross the road. He was hit by the car and killed. The motorist stopped his machine and approached the man.

"I'm very sorry, my man, that this has happened," he said. "Will five dollars fix it?"

"Oh, yes," said the man, "five dollars will fix it, I guess."

Pocketing the money as the car disappeared in the distance, he looked down at the dead animal. "I wonder whose dog it was?" he said.

The Electric Rubber Mfg. Co., Rutherford, N. J., are bringing out this season their new Panther Inner Tube. The special feature of the tube is that it is covered with an elastic fabric which is permanently applied thereto and which renders it several times stronger than the ordinary tube. We have tested this at a gauge pressure of 15 pounds, which is 12 or 13 pounds more than the regular rubber tubes now on the market will stand. We claim for this that it will not pinch, blow out or tear. People interested in tires can have a specimen sent on application to the makers.

### Good Enough for the King of England

In view of the great success which has recently attended the doings of the "Continental" tire, alike in races, competitions and at exhibitions, it is interesting to note that His Majesty the King's latest car has been fitted with the new pattern "Continental" tires of a specially large size of the non-skid pattern. The car, which is fitted with a powerful engine, has a heavy covered-in carriage body, and consequently a great strain is thrown

on the tires; and in view of the fact that a carriage for the use of the King must necessarily be free, as far as possible, from tire troubles, the compliment paid to the "Continental" tire is worthy of notice.

The Napier Motor Company of America was formed to sell English-made Napier cars and to manufacture exact duplicates of the same in this country. Under the terms of the contract the American company has the sole privilege of using in this country all past, present and future designs of D. Napier & Sons, of London. These designs the American company cannot deviate from in any particular. Mr. Albert Ritter, for many years factory superintendent for D. Napier & Sons, recently came to take charge of the American factory at Boston.

A Baltimore school teacher says that she once put a question to one of her boy pupils as to what was the distinguishing feature of the State of Texas.

"Texas," replied the lad, "is celebrated for being the only one of the United States that is the largest."—Harper's Weekly.

The Autocrat is the name of a very artistically gotten up little magazine of automobile comment and philosophy, published by the Daimler Manufacturing Company, Long Island City, N. Y. It is one of those cute, fancy articles that ladies delight to see on their parlor tables. It can be had without money and without price by the asking from the publishers.

THE AUTOMOBILE MAGAZINE is the oldest monthly in the field and has the best following among owners of automobiles, among the men who buy automobiles and the appliances pertaining to their use.



## Persons and Things

Alfred Reeves, known of no evil reports and admired universally, has gone into the real automobile racing with his own hand at the wheel. Those who know Al say that he will never give up as long as another man makes a mile in shorter time.

Among the latest converts to the pleasures of automobiling is Mr. W. H. Truesdale, president of the Delaware, Lackawanna & Western Railroad. It is natural that railroad men should take to this form of amusement. Mr. Truesdale is such a quietly energetic man that he is certain to take much comfort from spinning about in an automobile.

Mr. R. E. Fulton, the accomplished manager, for several years with the Pope Manufacturing Company, has accepted an engagement with the Mercedes Automobile Company, with offices in the Times Building, New York. Mr. Fulton is generally acknowledged as one of the leading authorities on the automobile, combining a practical training in mechanics with a wide business experience.

Boehm & Levine, of New York, have patented and put upon the market a very ingenious article of dress which they call "Mon Bijou." It is an article of head wear of the scarf kind, but by the wearer pulling two strings which tie under the chin it is immediately transformed into a hood. We only wish our companion had been wearing this article when our automobile took fire. It would have saved some hair. Send to the makers for pictures of this convenience.

Paul Sartori, Vanderbilt's chauffeur, is nursing wounds received while run-

ning an automobile through the State of New Jersey, respecting, of course, New Jersey State laws concerning speed on the public highways. Something went wrong with the steering gear and Mr. Sartori's car tried to climb a telegraph pole. It was not designed for that sort of climbing.

F. H. Marriott, who distinguished himself in his handling of the Stanley steam automobile at the Ormond (Fla.) races, has a name very familiar to the engineering world. The establishing of the Mariotte law that the density of gases varies inversely with the volume was an epoch in physics. E. Mariotte was a French physicist who labored to establish scientific truths during a long life that ended in 1684.

In a Scottish village lived what was known as the "innocent" of the neighborhood, that was the village fool. People used to offer him a silver sixpence and a copper penny, and the fool would always choose the big coin of small value. One day a stranger asked: "Do you not know the difference in value that you always take the penny?" "Aye, fine, I ken the difference," replied the fool, "but if I took the saxpence they wad never try me again."

The Maxwell-Brisco Motor Company, whose machines have been displaying fine racing possibilities, announce that they will build a racing machine to take part in the Vanderbilt Cup Race.

Winthrop E. Scarritt, former president of the Automobile Club of America, says that a crisis in automobile legislation has been reached and that the various organizations everywhere should buckle on their swords. The situation is critical, he thinks, because in several States the legislators are trying to do indirectly what the Constitution does not permit of being done directly, which is



to impose a high special tax on motor cars. The restraints put on legislators to impose secret personal taxes upon insurance companies makes automobile interests obvious victims.

#### Spring Improvements

The adoption of universal spring damper devices is one of the chief features of spring improvements this year. Most of them are adaptations of the Truffault damper, whereby the rebound of the carriage springs is partly absorbed by friction between two plates, one fitted to the axle and the other to the frame of the car. In the Matheson car there is an ingenious contrivance whereby the elongation of the spring under pressure is received by a rod working in an elongated sleeve, which has a most appreciable effect on vertical vibration.

A. L. Menges, of Grand Rapids, Mich., the designer of the Harrison automobile, has invented a self-starting device that is likely to become popular with the motorists who do not enjoy toiling on crank-turning.

Charles B. Shanks, the energetic sales manager of the Winton Motor Carriage Company, met with a painful accident to one of his eyes while attending the Chicago automobile show. He had to undergo a surgical operation which harassed him so much that he has gone to Florida to recuperate.

E. R. Thomas, of Buffalo, N. Y., the automobile manufacturer, is spending several weeks in California touring from one winter resort to another. Mr. Thomas left for the Pacific coast some days ago, leaving instructions that his car should be delivered to him there. Mr. Thomas is but one of the many who have given these instructions, and the indications are that there will be a host of

eastern tourists in California during the remainder of the winter and in the early spring season. This may be judged by the fact that the concern of which Mr. Thomas is the head has received no less than forty-eight orders from its New York, Boston and Chicago agents to have machines sold by them delivered in California.

Charles J. Glidden left Calcutta for Burmah on January 28, and after a short tour in that country he will go to Colombo, Ceylon, and then to Siam. His Napier car, with which he toured nearly 4,500 miles in India, stood the test splendidly, and only 120 miles of poor road were encountered during the entire trip. Mr. and Mrs. Glidden expect to return to America about July 1.

Leon Rubay, the sole importer for the United States and Canada of the Lacoste Electric Ignition Apparatus, will open on March 1 a branch store in Boston, Mass. In addition to handling a full line of the Lacoste coils, commutators, etc., he has secured the sole agency for New England for the Michelin Tire. Mr. George Lamberly, formerly secretary of the United States Michelin Tire Agency, will be in charge.

Charles E. Duryea, who knows as much about automobile mechanism as any man living, holds that the most valuable inventions used on gas motors originated in this country. He believes that they were gradually appropriated by foreign makers and then returned home as foreign products.

Sylvanus B. Bechtel, who for several years has held a responsible position with S. F. Bowser & Company, Fort Wayne, Ind., has been appointed assistant general manager. Mr. Bechtel is the kind of man that forces his way forward.

Frank Fanning has been appointed manager of the Haynes Automobile Co., Kokomo, Ind. He was formerly manager of the Electric Vehicle Company's interests in Chicago.

Although there is a new president and new secretary of the American Automobile Association, the old offices at 31 West 42d street, New York, will be retained for the present. Sidney S. Gorham, of Chicago, the new secretary, will occupy the New York offices, while President John Farson will make his headquarters in Chicago. Road maps and information for members concerning touring will be given greater attention than ever during the forthcoming season. All the work in this department is to be greatly enlarged and improved, more attention than ever before being paid to the convenience of the individual members.

**John Farson**

*President of the A. A. A.*

John Farson, who has recently been elected president of the Chicago American Automobile Association, has been actively connected in all movements tending toward the promotion of automobile interests for the past four years. He is a typical outgrowth of all that stands for American business backbone, grit and muscle of this twentieth century; and possesses the spirit of sound finance.

Some of the most notable transactions connected with the sale and purchase of foreign and national bonds have been negotiated through the bond house of Farson, Leach & Company, with which Mr. Farson has been connected for 17 years; but, as this issue goes to print, this partnership association has been dissolved and the new firm will conduct the bond brokers business under the name of Farson, Son & Company.

In the conduct of his business life Mr. Farson has always been identified, in my

mind, with a Corliss engine that I once watched for consecutive hours, with increasing awe and fascination at every stroke of its throbbing mechanism—but when the steel business muscles are relaxed and the social side comes uppermost, I find him one of the most rosy-cheeked, dignified schoolboys that I ever met, out on a vacation.

One of the most remarkable characteristics of this gentleman is an unusual balance of being; a certain equipoise,



JOHN FARSON

mentally and physically, which is largely due, probably, to the sound and wholesome conduct of his general life—physical, mental and moral—such as would receive the endorsement even of President Roosevelt.

In Mr. Farson's countenance there is a visible lack of that tense, nervous and hysterical strain which is generally recorded on the faces of our American business strategists.

At a time when, as Americans, we are

obliged to mention many of our representative financial leaders with bated breath, it is good to be able to raise one's voice in cheerful tones of praise without fear of misrepresentation, as we may certainly do in this case.

It is said that the hope of great political distinction is harbored in the mind of every lad; and it may be that Mr. Farson had already aspired to greatness when he was picking up coal on the railroad tracks in the little western town of Champaign, Ill., where he was reared. Yet I am inclined to believe that, at that particular time, his practical little mind was bent on calculating the number of miles to be traversed by weary little bare feet over the rough cinders in order to accumulate the exact amount of fuel necessary for warmth in the Methodist parson's home. That he was the son of a Methodist minister partially accounts for the embarrassed conditions that rendered this act necessary.

In the years of distance since then and now Mr. Farson has traversed other tracks that have led to wealth and distinction—won in the fields of endeavor—and, incidentally, has continued to gather coals by the way.

He has traversed a long road between his early self and what he has since become—both in the financial and social world.

Vast changes of fortune often occur within the narrow compass of one life—especially in that of a self-made one. There is always an ineffaceable, if indirect, influence of earlier years, especially if they have been marked by poverty—as were Mr. Farson's; but it is one of the beneficent results of republican training and a universal system of education, that an American who has risen from even the humblest beginning acquires an easy and unaffected self-confidence and self-respect that enable him to fit into any new position.

His great enterprise and activity in the West have rendered him one of the most esteemed citizens of Chicago, and he is also known there as "The Journalists' Friend," a term that betokens much and tells many things to those who read between the lines—important ones; but I have been obliged to leave them unwritten, owing to lack of space.

Mr. Farson is at the head of the Calumet Electric Street Railway Co., executive of the Chicago Automobile Club, vice-president of the Good Roads Association, and is interested in various traction and gas corporations.

He was born at Union City, Ind., in 1858, and was educated in the public schools and the University of Illinois. In 1880 he was admitted to the bar.

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A decided novelty in the line of shows has been planned by C. A. Wahlgreen, of Denver. He is planning a transcontinental automobile show by train next season and is well pleased with the approval given to his scheme by western manufacturers. About a dozen manufacturers have already secured space on the train for motor cars, and it is expected that over twenty will be represented.

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H. Bertram Hellam, of Sioux City, Ia., has just closed a contract with the Reo Motor Car Company to act as the Reo agent in twenty-six counties in Iowa, South Dakota and Nebraska. He reports that many of the well-to-do farmers are becoming enthusiastic users of the motor car.

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Charles Wridgway, who drove a Peerless car on the Empire City track last summer for twenty-four hours without stopping, and made a new 1,000-mile record, intends to make another attempt to break his record this coming season. He will drive one of the regular Peerless touring cars, and he hopes to be able

to make his trial on the Empire City track.

H. B. Stillman, formerly of Hartford, Conn., and who has been with the Quaker City Automobile Company, of Philadelphia, for the past year, has accepted the position of manager of the Philadelphia branch of the Mercedes Import Company of America.

#### **J. Ross Anderson**

The many friends of Mr. J. Ross Anderson, for many years assistant superintendent at the De La Vergne Machine

Company, and is a thoroughly accomplished and all-round machinist. He made many improvements in the smaller machines used by the De La Vergne Company, and is in every respect eminently qualified for the new position to which he has been appointed. He was the recipient of a gold watch suitably inscribed and other valuable presents from the company and employees. At the new works at Wilkesbarre there are already between three and four hundred skilled workmen, and when in full operation there will be employed over 1,000 men.



CHINESE DOG AT WHEEL IN MR. ELLIOTT F. SHEPARD'S HOTCHKISS CAR

Works, East 138th street, New York, are much pleased to hear of his appointment as manager of the new works of the Matheson Automobile Company, now being established at Wilkesbarre, Pa. Mr. Andersen is a native of Dundee, Scotland, and learned engineering in the Douglas foundry there. He is also a graduate of the Dundee Art Schools. He was employed for several years in the repair shops of the Manhattan Railway

#### **New Officers of American Automobile Association**

The national officers elected by the Association are as follows:

President—John Farson, Chicago Automobile Club.

First Vice-President—William H. Hotchkiss, Automobile Club of Buffalo.

Second Vice-President—Dr. Milbank Johnson, Automobile Club of Southern California.

J. H. Edwards, Automobile Club of Hudson County.

K. G. Roebling, Mercer County Automobile Club.

W. C. Temple, Automobile Club of Pittsburg.

H. Bartol Brazier, Automobile Club of Philadelphia.

W. T. White, Cleveland Automobile Club.

Val Duttenhofer, Jr., Automobile Club of Cincinnati.

W. S. Belding, Automobile Club of Maryland.

Asa Paine, Florida East Coast Automobile Association.

A. B. Lambert, Automobile Club of St. Louis.

E. H. R. Green, Dallas Automobile Club.

Third Vice-President — Lewis R. Speare, Bay State Automobile Association.

Treasurer—George E. Farrington, Automobile Club of New Jersey.

Secretary—Sidney S. Gorham, Chicago Automobile Club.

Directors were also elected as follows:

John Farson, Chicago Automobile Club.

W. H. Hotchkiss, Automobile Club of Buffalo.

Dr. Milbank Johnson, Automobile Club of Southern California.

L. R. Speare, Bay State Automobile Association.

G. E. Farrington, Automobile Club of New Jersey.

William A. Rolfe, Massachusetts Automobile Club.

Asa Goddard, Worcester (Mass.) Automobile Club.

Dr. F. E. Constans, Brocton (Mass.) Automobile Club.

Dr. F. W. Brandow, Berkshire (Mass.) Automobile Club.

S. L. Haynes, Automobile Club of Springfield.

R. L. Lippitt, Rhode Island Automobile Club.

David H. Morris, Automobile Club of America.

A. R. Pardington, Long Island Automobile Club.

F. H. Elliott, Syracuse Automobile Club.

H. S. Woodworth, Rochester Automobile Club.

N. M. Pierce, Binghamton Automobile Club.

A. G. Batchelder, New York Motor Club.

F. R. Pratt, New Jersey Automobile and Motor Club.

G. A. Post, North Jersey Auto Club.

W. E. Edge, Atlantic City Automobile Club.

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The Winton Motor Car Company have always been noted for the interest displayed in the comfort and welfare of their employees. They have just recently established a school of automobile instruction with hourly sessions daily at noon. This school will take up in orderly manner not only the theory and practice of automobile construction in general, but will as well cover manufacturing, sales and advertising methods in an exhaustive manner. While the school will be under the immediate direction of General Sales Manager Shanks, the technical lectures will be given by the company's engineers, and from time to time addresses will be made by President Winton, Vice-President Henderson and Secretary Brown.

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A popular chord has been struck in the automobile world by the decision of the Automobile Club of America to offer prizes for competitions to test new devices and improvements as well as for inventive ability in the line of automobile needs. At the recent meeting of the board of governors a special committee



was appointed, with George F. Chamberlin as chairman. Its purpose at present, as explained by President Dave Hennen Morris, is chiefly for the purpose of advising the governors what prizes to offer and the manner of their competition. It is quite possible that prizes will be given for the best inventions of certain kinds made within a stated period of time, and other prizes be awarded for an open contest to show the benefit of new carbureters, anti-skidding devices, automatic starting devices, and other practical features.

We intend establishing a department of "Caring and Repairing," which will be devoted to discussing details about the repairing and care of motor cars. The articles must be written by men who do the actual work. We will pay liberally for articles of this character.

Among the Americans who visited Cuba at the time the races were going on was Charles D. Cooke and wife, of Paterson, N. J. Mr. Cooke, who is connected with the Darracq Car Company, is now an enthusiastic automobilist. He was formerly a keen bicycle rider, and a common sight on the New Jersey roads was to see Mr. and Mrs. Cooke pushing along a tandem at a lively clip.

The regular Directors' meeting of the new board of the American Automobile Association will be held in this city on March 8. John Farson, the new president, who hails from Chicago, will preside, and he will announce the chairmanships of his new committees at that time. Great interest is being taken in the Racing Committee chairmanship for the coming year. Indications point strongly to a retention of Robert Lee Morrell, provided he can be induced to remain.

Sidney S. Gorham, the new secretary, will take up his duties here on March 1, retaining the same American Automobile Association headquarters at 31 West Forty-second street.

Frank A. Devlin, president of the Acme Motor Car Company, held evening levees at the company's exhibit at the Chicago show. During each evening the exhibit was the scene of much splendor, with the brilliant gowns of the women and the immaculately attired men occupying the various cars. Among those who visited the booth during the show were Edward A. Potter, Mr. and Mrs. John Farson, Sr., Mr. and Mrs. John Farson, Jr., John G. Shedd, Mr. and Mrs. Harry J. Powers, Mr. and Mrs. Charles Plamondon, John J. Mitchell, Harry G. Selfridge, Howard Gillette, and John Moran, all well known among automobilists.

J. Pierpont Morgan, Jr., was elected to active membership in the Automobile Club of America at the regular governors' meeting this week. Over twenty members were elected, and a very favorable report was made regarding the work on the new club house, West Fifty-fourth street, near Eighth avenue.

Comte Henry de la Valette arrived in New York last month as a delegate from the Automobile Club of France to study the automobile situation in America and report on the progress of the industry to the French club on his return. He left yesterday to visit the automobile factories in Detroit, Buffalo, Toledo, Cleveland, Chicago, and other western places. With better roads in America, Comte de la Valette believes American automobiles will increase greatly in popularity, and their manufacture become a severe menace to foreign makers.

Nellie Bly, who made much stir a few years ago as a newspaper reporter, is now connected with the automobile industry. Nellie Bly married Robert Seamans, and at his death, about two years ago, she assumed management of his great plant and is now employing from 1,200 to 1,500 people manufacturing steel storage gasoline barrels for the automobile and motor trade. She also makes almost everything conceivable in the way of steel cams, etc., and her display of the products of her factory will be a unique one.

You will find THE AUTOMOBILE MAGAZINE in all the reading rooms and places of public resort where the proprietors pay for the literature on file.

The Duryea Automobile Company is about to build new works at Oxford, Pa., a small town on the Pennsylvania Railroad.

A practice became prevalent in New York of stylish but impecunious young men imposing upon automobile dealers for free rides under the pretense that they intended buying a car. A deposit or first payment is now demanded as a condition for a trial ride and the dead-head has disappeared.

Commercial automobiles are coming slowly into importance and the indications are that they will soon be much more in evidence than the pleasure vehicle. It seems to us that the Middle West is going to take the lead in working up the commercial motor wagon industry, and that the Kansas City Motor Car Company is going to secure a good share of the business. Persons interested in power wagons should send for their illustrated catalogue.

#### Quick Run from London to Edinburgh

Mr. Chas. Jarrott made a non-stop engine run on a 28 H. P. "Crosley" car from London to Edinburgh. He wished to arrive at Edinburgh in time for the opening of the Exhibition.

Upon his arrival there he telegraphed to the London office of the Continental Caoutchouc Co., as follows:

"Edinburgh, January 27, 1906. 7:08 P. M.—Continental Tires on my Crosley car behaved splendidly. No trouble of any kind. Distance covered London Edinburgh 20 hours 35 min. without stopping engine. Charles Jarrott."

The distance covered was 350 miles, which is a creditable performance, demonstrating that "Continental Tires" are built for heavy and fast road work.

The most common announcement seen in connection with newly formed companies is that they are going either to build or to sell automobiles, power trucks or motor boats.

The determination of the A. A. A. to exclude from races cars that are not made with differential gear is likely to cause some annoying complications. The Association has not enforced its rules strictly in the past, and cars without having differential gear have been awarded prizes in various contests. Some people are insisting that prizes so won should be returned, but we believe it would be better all round to let bygones be bygones.

The Maxwell-Briscoe Motor Company announced some time ago that it would build a racing machine to compete in the Vanderbilt race, if it was held in this country. The known soundness of the construction of Maxwell cars and their wonderful records in track races as well as in private use insures the importance of the car which the company is to build

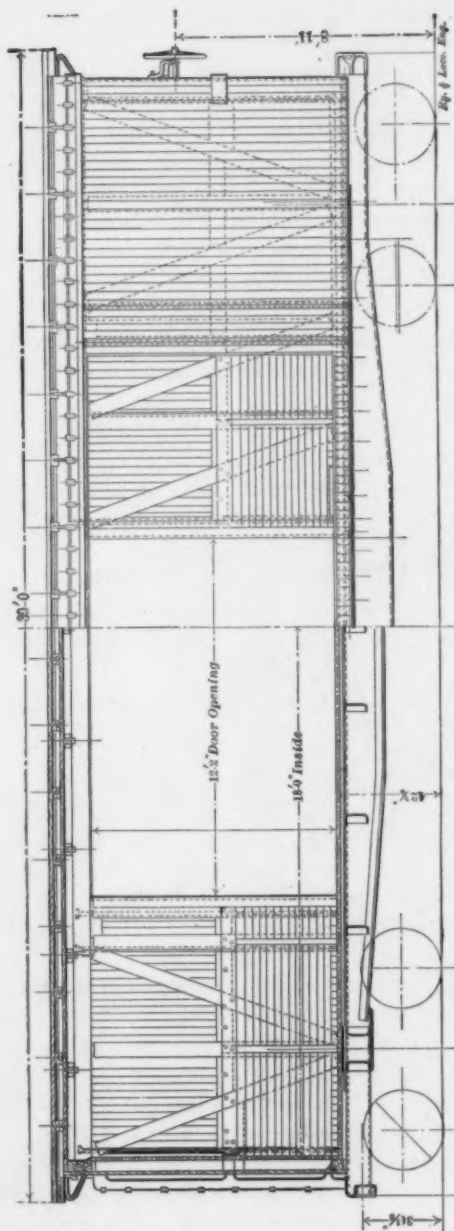
as a factor in the running of the Vanderbilt race. Further announcement regarding the racing car which is to be built by J. D. Maxwell will be awaited with interest.

### Box Car for Automobiles

Men who draw cartoons for the comic papers often have a little fun at the expense of automobilists by representing a splendid modern motor car being hauled home by the much-despised horse. The Pennsylvania Railroad, however, are able to transport the automobile, whether broken down or in good condition, and in a way which is not calculated to hurt the tenderest susceptibilities. There are 100 specially designed box cars being built at the Altoona shops of the railroad, which have extra large doors, diagonally placed so that automobiles can be easily loaded and unloaded, and a long or short journey can be made without trouble of any kind.

The box car, which is 38 ft. 6 ins. long over the bumpers, is made with ordinary doors opposite each other in the sides of the car, and these doors are 6 ft. 1 in. wide by 8 ft. 4½ ins. high. The car as it stands can be used for freight in the usual way, but when it comes to automobiles the Pennsylvania box car opens a second door in either side and thus gives a total door opening per side of 12 ft. 2 ins. wide by 8 ft. 4½ ins. high. The large opening is got by removing a temporary center post where the two doors meet, and by running them back from each other along the sides of the car. In fact, the doors are arranged very much like the sliding doors in a dwelling house which are used to separate parlor from dining room, but with this difference, that the house doors meet in the center and the box car side doors butt up to a removable post in the middle. This arrangement is made so that only the ordinary box car door will be used unless the car is to carry a motor car.

The plan of the wide automobile doors is shown in the sketch, and the diagonal arrangement is at once apparent. Two road machines can, if necessary be carried in one car. The floor of the car is



42 $\frac{3}{4}$  ins. from the top of the rail, and the car is 8 ft. 4 ins. wide and 36 ft. long inside. This gives a floor area of 300 sq. ft. The car has a tare weight of about 45,000 lbs. and a marked capacity of 100,000 lbs.

The side sills of the car are made of what are practically Z-bars, and these are faced on the outer side by wooden stringers about 5x4 ins., which are the end supports of the floor planks. The center sills are made of two pressed steel shapes of the channel form, reinforced with an angle along the lower edge. The ends are 10 ins. deep, and the lower flange is sloped down to a depth of 17 ins. for a distance of about 12 ft. in the center of the car. The body bolsters are also made of pressed steel shapes placed with backs 11 $\frac{1}{2}$  ins. apart, and the side and center sills are held rigidly together by a series of seven pressed steel diaphragms on each side.

The details of the side door construction are interesting. The door is an example of what is called the flush style; that is, when shut, it and the car side form one unbroken plane, and when the door is to be opened, a turn of the handle swings the back edge of the door out clear of the side, and the front end follows along an inclined guide or track, as the door is backed out and away, so as to give a full opening. The motion of the back edge, first out and then along the slide on which it rests, is accomplished by reason of the fact that the door level bar is cranked.

The front edge of the door butts up against a post which has been so designed that it can be removed when an automobile has been presented for shipment. This post is made of an I-bar of steel 5x9 ins. and weighing 75 lbs. The ends are placed in suitable sockets, top and bottom, and the bar is fastened in this position. The flush door, when in place, can be securely locked, as the back

edge butts up closely against the door post and is in line with the car side, while the front edge slips in under the outer flange of the temporary door post, which, by the way, is a very permanent thing, as anyone outside would find if he attempted to remove it while the doors were locked.

### Confusing

Automobiling is a little hard on the strict morals of Scotch motorists. James Shanks, of Perth, who had wrestled with the waywardness of a local automobile for two years, attended a comforting reunion of his fellow craft one evening and got home in the wee short hours ayont the twal. He slipped quietly upstairs, and his wife, Mary, heard a succession of grunts that indicated discomfort.

"What's the matter with you, James?" was the natural inquiry.

He was sitting on his knees beside the bed and answered: "I canna mind a damned word of my prayers."

The Lambert motor truck is well worth investigation by people tired of using horses to haul heavy loads. The Buckeye, Mfg. Co., Anderson, Ind., will send an illustrated catalogue to any one interested.

The Electric Rubber Manufacturing Co., Rutherford, N. J., are making great claims for their Panther Heater-Cured Wrapped Tire. This is not made in a mold, as other tires, but on a drum. In putting rubber and fabric together in a mold there is oftentimes a little too much material used, and when the mold is closed under pressure something has to give, and the fabric always does, or, in other words, is crushed, which impairs its strength—sometimes not enough to be noticeable, and other times almost enough to destroy it. In this new tire of theirs the fabric is not subjected to pressure at any time, and is just as strong

in the finished tire as the day it left the mill. This process of making also makes the tire livelier. Taken altogether, it is the liveliest and strongest tire on the market.

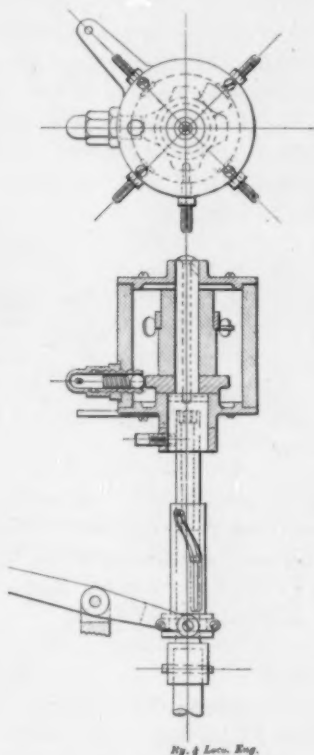
There was a meeting last month in Brooklyn of engineers and factory superintendents connected with the automobile industry for the purpose of discussing matters of common interest in connection with automobiles. We think it would be a very good idea to establish clubs for people interested in automobile matters, the same as the numerous railroad clubs throughout the country. If the automobile clubs in existence would take up familiar topics and discuss them, it would make their meetings more attractive than they are. In the first years of automobiling people who operated all automobiles knew so little about their construction that it was difficult for them to discuss automobile questions; but now there are so many men well versed respecting the design and operating of automobiles, that experience meetings could be made very interesting.

A new candidate for public favor is "The American Car," made by the American Motor Car Company, Indianapolis, Ind. An illustrated catalogue published by the company gives a good idea of the construction and appearance of the car.

One of the most interesting matters at the Automobile Shows this season, and one which has created the most comment among Automobile users in general is the gradual, but nevertheless sure, change from the old-style leather-faced Cone Clutch to that of the Disk type. Not only is this true of the more advanced styles in American high-powered cars, but in the most favored European makes, too.

### The Grout Advance Spark Appliance and Distributor

The distributor is made of a rubber cylinder. The primary contact is a ball against a hardened tool-steel cam. The secondary has a short gap with no friction surface. The central shaft has a large bearing both top and bottom, insur-



GROUT ADVANCE AND RETARD APPLIANCE

ing long wear and making it run perfectly true, remedying trouble with most distributors. The bearings are oiled through an oiler on top of central shaft. The entire internal mechanism can be taken out by removing four small screws. The distributor is anchored to the engine securely and always remains in place.

The revolving portion of the dis-



tributor is advanced or retarded by a spiral-grooved sleeve moving the part to which the distributor is attached ahead of the cam shaft. By this method the wires remain stationary, preventing the trouble of wires breaking off, common to most distributors. The spiral sleeve is operated by a collar and lever to which connects control lever on top of steering post.

The automobile dealers of Baltimore are arranging to form a trading organization for the protection of their interests. Associations of this sort are found in practically all of the large cities of the country, and their benefits are many and obvious. One of their important objects is the regulation of rates on wares and the establishing of a fixed charge for storage, etc. It is safe to say that at present there are no two garages in the city charging the same amount per month for storing cars. All of them have their own rates.

The Knox Automobile Company has put upon the market a motor truck that has a hoisting attachment worked by the engines. There is a great future for a truck of that kind.

The new model of the Brennan motor, made by the Brennan Manufacturing Co., Syracuse, N. Y., has double opposed horizontal cylinders which develop about 16 H. P. What promises to be an excellent feature of this car is a new carbureter which has been designed to regulate the supply of gasoline vapor with scientific accuracy.

The Hon. Arthur Balfour, late Prime Minister of Great Britain, now a man of leisure, is a very keen golf player and loses no opportunity to take a turn around the links. During a visit to a French city Arthur found leisure for a turn of his favorite game and started

out with a caddie who knew only the English language as he had heard golfers use it. The Prime Minister made a remarkably good put, and in the absence of more influential admirers turned to his caddie for some sign of commendation. The caddie, drawing upon his limited stock of English, praised by saying: "De hell of de fluke!"

The great extent of space occupied by recent automobile shows has set the promoters of such concerns at their wit's end to find buildings large enough for holding automobile shows. The dealers and manufacturers of the State of Indiana seem to have found an easy way of solving this difficulty for their next year's show. They propose holding it in the open air. The plan has several advantages, but some drawbacks. The exhibits will be very clearly seen, but should the weather happen to be inclement the result would be disastrous. Automobile exhibitors might follow the practice adopted by the exhibitors at the railroad conventions, which is to put up weather protection for themselves. If this was done over a great area of ground, it would have a very picturesque effect.

If you are interested in ignition plugs send to R. E. Hardy Co., New York, for their illustrated catalogue and you will see sparkers enough to make you see stars. Tell them you asked for it because we advised you to do so.

If you wish to study the working of an automobile based on knowledge of detail, send to Haynes, Kokomo, Ind., for their 1906 illustrated catalogue. It is full of practical information made plain.

Harry S. Houpt has taken the agency for the Rauch & Lang electric carriages. This company builds a Stanhope which is guaranteed to make seventy-five miles on one charge of the battery.

## Recent Books

### Samuel Smiles

E. P. Dutton & Co. have just published an autobiography of Dr. Samuel Smiles, the British author, whose biographies of eminent men were an important educational feature of the literature of the nineteenth century. Dr. Smiles's books have been translated into every language of Europe and some of Asia. His style was full of quaint conceits and his latest work has all the characteristics of his earlier works. His life was uneventful but is particularly interesting in view of the many distinguished people that live in his graphic pages. His travels have something of the joyous touch of Fielding's finest work, and the painstaking and deliberate chronicle has the minuteness of De Foe, whose "Robinson Crusoe" was doubtless the model that Dr. Smiles studied in obtaining a style that has a peculiar fascination for the young.

### Gas, Oil and Air Engines

The fourth edition of Mr. Bryan Donkin's admirable work on "Gas, Oil and Air Engines" has been issued from the press of Charles Griffin & Co., and, with enlargements and revisions, immediately takes its place among the highest authorities in the branch of machinery to which it is devoted. An exhaustive series of tests of a large number of engines makes the work valuable to the designer and almost indispensable in an engineer's office. The theory of the gas engine is dealt with in a comprehensive and capable manner, and a very interesting description is given of the controversy respecting the suppression of temperature upon explosion and the question of the variability of specific heats in gases. It is noteworthy, however, that the learned au-

thor did not arrive at any particular conclusion in regard to these important questions. The work furnishes a complete history of these engines from the beginning of their first manufacture to the present time.

### Sir Ian Hamilton's Scrap Book

Longman, Green & Co., New York, have just published a bulky volume of nearly 400 pages, giving a graphic, and sometimes intensely dramatic, account of the Russo-Japanese war by Lieut.-Gen. Sir Ian Hamilton. This distinguished Scottish soldier had many advantages in seeing what was going on which were denied to the ordinary war correspondent. He was the highest ranking British officer accompanying the commander of the Japanese army. He had a staff of aides whom he was able to place where they could do the most good in the way of gathering information. The book is largely composed of portions of letters and notes which formed no part of his official report to the British Government. It shows the writer to be a keen observer of men and events. As a student of history he is ever ready with some parallel instance largely reflecting on the stupidity and mismanagement of the Russian army. Many instances are quoted from the American civil war showing how thoroughly Sir Ian has conned the history of that gigantic struggle. His admiration of the intelligent activity of the Japanese army is very great, although nothing particularly remarkable occurs in the slow-moving campaign, which after all that the experienced British soldier states, has more the appearance of a well-drilled machine moving leisurely against an ill-prepared and worse organized force. The best parts of the book are, perhaps, the closer visions of the individual Japanese in the routine of the daily life of a soldier; how uncomplaining

ingly they trudged on and how quietly they could lie down, and how stoically they rose up and none could make them afraid. There is nothing of the usual boisterous bravado of conquerors on the march, no battle songs, no blare of trumpets, but now and then a nightingale breaking into song and the long, scattered line stops still as stones on the hillside and the rapt faces of the little brown men glow as if a celestial choir were singing to them. Men who have this fine trait in them are at peace with themselves. They do not need the roll of drums or the warbling of bugles. Nature in her beauty and solitude, with the murmur of waters, the rustling of waving fields, or the melodious song of birds, is all in all to them. As a closer view of the mysterious Japanese character and a vivid history of an utterly unnecessary and gigantic struggle, the book is a notable addition to the literature of our time.

#### William Pitt

The centenary of the death of William Pitt, the British statesman, has been fittingly commemorated throughout the world, and Mr. Charles Whibley's new "Life of the Younger Pitt," published by Blackwood, appears opportunely to remind us that the great statesman was perhaps the last commanding figure who maintained the heroic spirit in the British people by the sheer force of eloquence. During the long war with the French, which began in 1793 and continued with brief intervals of peace until 1815, it was the eloquence of Pitt that matched the military genius of Napoleon. Amid discontent in the country, dissensions in the Cabinet, mutiny in the fleet, with a conscript army and an imbecile king, Pitt's was the one clarion voice to which the nation listened. In the darkest hours he was never discouraged. His heroic example kept others from despair. Baffled and beaten as the British were on

land, Pitt conceived the notion of making other European armies fight the French while he fired the British to maintain dominion of the sea. His policy made Trafalgar possible. He had the rare faculty of knowing at all times what was the next best thing to do, and pointed it out with a clearness of vision and a splendor of diction that commanded universal admiration. He was the pilot who steered the British ship of state through her darkest storms, and the example of Britain saved Europe.

#### A Projected Auto Road

Mr. John Brisbane Walker addressed the members of the Automobile Club of America on February 20, advocating the construction of an automobile highway between New York and Philadelphia. Mr. Walker graphically outlined an ideal highway, straight as a meridian line, one hundred feet wide, fenced at the sides and in the middle, the autos going south on one side of the central fence and north on the other side, the machines nearest the central fence going fifty miles an hour, the next about thirty, and the autos at the outer edge going along at a speed of twelve miles an hour; the roadbed to be finished with blue slate and smooth as monumental alabaster. Mr. Walker estimated that the road would cost \$6,000 a mile. He illustrated the subject with maps. The road looked beautiful—on paper. Mr. Walker did not venture an estimate on the price of the necessary strip of New Jersey, or the cost of passing the necessary measures through the New Jersey Legislature.

Automobile enthusiasm in Hawaii has expressed itself in the formation at Honolulu of the Automobile Club of Hawaii, with seventy members. The president, J. A. McCandless, is the first Hawaiian owner of a Winton model.

### A French Decision

An interesting decision has been given in France in upholding the Renault patent of 1899 for the direct gear-driven car, by means of which the Renault Company are able to claim royalties on all gear-driven cars in which the direct drive is employed, and where for the purpose of gearing down a cut is made in the direct-driven shaft of the gear box to enable such a reduction of gear to be effected. It is this latter part of the patent which embodies the essence of the invention. This decision practically compels a payment of a royalty on all French cars of the gear-driven type to the Messrs. Renault Freres.

The Auto-Top Company of New York has been incorporated and has taken over the factory of the Lincoln Automobile & Carriage Co.

### American Motor Car Manufacturers Association

The annual meeting of the American Motor Car Manufacturers Association was held in Chicago last month with a very full attendance of the membership.

The Association decided to increase the number of its Committee of Management from five to nine members. The following nine gentlemen were elected: Benj. Briscoe, James Couzens, J. B. Bartholomew, A. C. Newby, Wm. Mitchell Lewis, Chas. E. Duryea, Chas. Lewis, Walter Marmon, W. H. VanDervoort.

The Association also voted unanimously to hold an outdoor show in either the months of September or October, inviting the trade at large to join them. The Association will become responsible for the management of the show. The general manager was instructed to investigate immediately and make a recommendation for the location of the show at the earliest possible date. The Association desires by this course to lengthen the manufacturing season for

the manufacturers, and thus gain a reduction in the cost of their product. Offers of locations for the exhibit are already coming in from various cities.

The Crawford Automobile Co., of Hagerstown, Md., and the Dorris Motor Car Co., of St. Louis, Mo., have recently been elected members of the Association.

### The Buffalo Show

The managers of the coming fourth annual Buffalo automobile show are displaying a great deal of enterprise in their efforts to make the show attractive. They have arranged to make all the signs and decorations uniform, so that they will excel anything of the kind that has ever been attempted outside of New York or east of Chicago. The entire floor space will be covered with a carpet of one color, making that part entirely uniform. The overhead decorations will be in white and gold, not old bunting and cloth that is seen in the hall for every ball and dance, but brand new material, and not only will these colors be carried out overhead in such a way that there will not be a girder seen, but the side walls, the gallery, underneath the gallery and, in fact, everything will be covered and decorated in white and gold, and, coming to the signs, no exhibitor will be permitted to put up any special sign. The management will let one contract for this work. The signs will be placed north and south in the building and will be two feet six deep and run the length of each space. They will be of a white background and gold lettering. Placed above the signs about six inches will be a reflector, and in this reflector will be placed a 16-candle power electric lamp. These lamps will be placed 12 inches apart throughout the sign work, and they will be placed at a height that will give the best results in throwing the light directly on the cars in the exhibits.



### Value of Developed Observing Faculties

Making inventories of the contents of wealthy folks' houses is the work of five clever young women in the city who earn on an average \$100 a month, says the New York Sun, often more. It isn't that the work is altogether new. Only the cleverest girls can do the work. Four out of 100 is the average number selected from those who apply.

When asked what are the qualifications necessary for a woman to become expert at the business the young man who directs the work tersely responded, "Brains."

"Nor is this all," he went on, half smilingly, but biting his words off in a manner that indicated that he meant what he said. "She must not only be endowed with brains, but she must use them."

"It seems to me that nine out of every ten girls go through life with their eyes shut. They might be stone blind for all the knowledge they retain."

"If one of my assistants is called upon to classify a leather divan she must know whether it is pebble or calf and the reason why. Hardwood may be of any of a dozen or more varieties. She must be able to recognize it by the color, the grain and the quality and so record it."

"One woman may think herself to be an expert on rugs. To her notion a rug is either Turkish or Persian or the product of some other country."

"But that won't do. She must have sufficient knowledge of rug lore to tell from what province a rug comes."

"In short, she must be an expert on no end of things and be as ready to classify a rare old ivory carving as a Tombola lace bedspread. She must know art from A to Z, and have her knowledge at her fingers' ends when wanted."

Although the requirements are severe, the girls who succeed enjoy the work im-

mensely. A day is eight hours, allowing an hour for luncheon, the girls presenting themselves for duty at 9 A. M. and leaving at 5 P. M.

At all times they are surrounded with beautiful objects of art, for none but the wealthiest folk can afford to have the work done, as the fee is \$30 a day and the work of inventorying one house will take anywhere from one to three weeks and in the case of a man who owns several homes the work may extend over several months.

### He Was Excused

The question went round, "What is a boss?" and each man present tried to give an epigrammatic definition.

Finally the question reached Slimmer. He flushed slightly and shook his head.

"You'll have to excuse me, gentlemen," he said. "The only boss with whom I am acquainted is at the head of my modest household, and politeness to a lady prevents me from commenting upon her characteristics."

They excused him.—Cleveland Plain Dealer.

### Guarding His Dignity

As a large ocean-going steamer was making her way down the Clyde the officer in charge found his passage blocked by a dirty-looking, empty ballast barge, the only occupant of which was a man sitting smoking a short pipe. Finding that he did not make any effort to get out of the way, the officer shouted to him in true nautical fashion. Taking the pipe from his mouth, the fellow rose and said:

"An' is it yerself that's the captain of that ship?"

"No," was the reply; "but I am the chief officer."

"Then talk to your equals," said the Irishman; "I am the captain of this."



### Stanley Steam Racer

The Stanley steam racer, illustrated on page 150, which is recognized as the fastest self-propelled vehicle ever produced in the world, is described as follows:

The wheel base is 100"x54". The rear or driving wheels are 34" diameter, 3½" cross section. Front wheels 34" diameter by 3" cross section. The tires used were the regular G. & J. Standard clincher tires.

Wire-spoke wheels, the tires being bolted to the rims with eight tire bolts and so perfectly balanced with counterweights that there was no vibration when the wheels were making upwards of 1,200 revolutions per minute. The running gear was the same as that used on the Stanley touring car, with the exception of the wheels, and those had wire instead of wooden spokes. The body of the car was built entirely of wood and mounted on four full elliptic springs, the springs being placed on the inside of the body so as to reduce the air resistance to a minimum. Ball bearings of the two-point type with ¾" balls were used in the running gear.

The body was 16 ft. long and 3 ft. wide at the widest part, pointed in front and terminating at the rear in a circle with 8" radius, tapering to that width and to the point in front with cycloidal curves, or curves with constantly diminishing radius. The bottom of the car was perfectly straight and smooth and has a clearance of 10½". The sides are vertical to a height of 18", and from that line the removable top is oval, curving both transversely and longitudinally. The largest cross section including the wheels amounts to 9 sq. ft.

The power plant consists of a boiler 30" in diameter and containing 1,476 tubes, 33/64" outside diameter and 18" long, and contains 285 sq. ft. of heating surface. The steam was superheated by passing it through tubes surrounded by

the contents of the boiler and through coils of pipe in the fire box, to a temperature of about 700 Fahr.

The engine was the two-cylinder, double-acting type, with cylinders 4½" bore by 6½" stroke, Stephenson link valve gear and D slide valves. The bearings on crank shaft, crank pin and eccentrics were ball bearings of the two-point non-adjustable type, and the crosshead also was provided with a ball-bearing slide, thus greatly reducing loss by friction.

The engine makes 350 revolutions to the mile while the 34" driving wheels make 600 to the mile. Linked up as the engine was in forward gear, the cut-off was about 1/3 stroke and the mean effective pressure about 1/2 the steam-chest pressure. The engine, therefore, develops 6 H. P. for each 100 revolutions per minute and each 100 lbs. steam-chest pressure. The boiler will furnish steam for 50 H. P. continuously and more than twice that amount for three or four minutes.

The arrangement of parts of the power plant is as follows: The boiler is placed just back of the center of the body, the water tank between that and the rear axle. The engine was geared to the driving axle by spur gear and is placed horizontally at the rear of the axle, so that the driving force of the engine tends to lift the front axle and transfer the load to the rear axle, thus giving the greatest possible traction to the driving wheels.

In making the record of 28½ seconds to the mile the power developed was probably about 120 H. P. The engine made 745 revolutions per minute.

The total weight of the car without water and fuel is 1,675 lbs. The motor, including boiler, engine, tanks, pumps, etc., weighs 835 lbs., or about one-half the total weight. In the long races a boiler pressure of 500 lbs. and in the short races 900 lbs. was carried. The

highest steam-chest pressure was 350 lbs. That would give a direct thrust on the driving wheels of about 400 lbs.

The owners found in their experiments at Ormond that a speed of a little more than 100 miles per hour could be maintained continuously, or at the rate of 35 sec. to the mile. The five miles that the machine covered in 2 min. 47 sec. was at a 33 $\frac{1}{2}$  clip. That was in a race.

#### **Turbines Proving Economical**

Although the steam turbine is older than the Christian era, its development has been exceedingly slow and many obstacles have hampered its application since modern inventors demonstrated that as a power medium it is not inferior to good reciprocating steam engines. The earliest known steam turbine was described by Hero of Alexandria in the second century, and was doubtless then an old invention of little practical value. Attempts to make it a practical engine were made about 1624 by Branea, an Italian; in 1650, by Somerset, an Englishman; then it was neglected for over two hundred years until, in 1853, Tournaire, a French engineer, indicated lines on which the turbine might be made a successful steam motor. This exercised powerful influences and directed the attention of De Laval, a Swedish engineer, and Parsons, an Englishman, whose labors brought forth the modern steam turbine.

This form of steam motor has received much attention from American engineers, and Professor Curtis, of New York, has invented some very valuable improvements. The steam turbine is becoming, on this side of the Atlantic, a favorite form of motive power for electric generating plants, while in Europe its favorite scope is in marine work. British steamship owners have taken the lead in the introduction of turbines for ship propulsion and they displayed great enter-

prise in this line, for not a few turbines were applied to steamers when the engineering world still believed that turbines would be more costly to operate than reciprocating engines.

A large pleasure steamer with turbine engines was placed on the Clyde three years ago and she gained great popularity through her high speed and freedom from vibration. Since that time turbine marine engines have been growing rapidly in favor in British waters. A series of most virulent attacks on the turbine has been made by German engineering writers, but they were characterized more by spleen than by the statement of facts, and have apparently exercised no influence on public opinion. There are already several large transatlantic steamers provided with turbine power, and one company has on the stocks two huge steamers calculated to make 25 knots (28.7 miles) an hour.

A very interesting and valuable report has just been made public by the Midland Railway of England concerning the economical working of new turbine steamers that have been in service this season. This railway maintains lines of steamers to Ireland and to the Isle of Man, and in both services have a turbine steamer running which is practically identical with other vessels on the same route propelled by reciprocating engines. The Antrim and Donegal are the old boats, and the Londonderry and Manxman the turbines.

During the season's service the Manxman made an average speed of 23.4 miles an hour on the same amount of coal required to propel the Antrim 22.5 miles. For the same power there was 115 tons less weight of machinery, and the expense of minor supplies was less. But the smaller fuel bill is the important item the engineering world has been working for.